

Evaluating online blocking software

Prepared for

GambleAware

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Contents

Contents	2
Executive summary	5
1. Background	9
Introduction.....	9
Methodology	10
Original scope of work.....	10
Work extension	13
This report.....	13
2. Does blocking software prevent access to online gambling?.....	14
Overview of software available on the market.....	14
What blocking software does and how it works	14
Additional functionality	16
Ease of installation.....	16
Ease of uninstallation	16
Technical effectiveness of software	17
Core technical testing.....	17
Additional technical testing of gambling-specific packages	20
Blocking helpful content	21
Ways to circumnavigate software.....	21
Relative advantages and disadvantages of software	22
Continuous improvement.....	22
3. Can blocking software reduce gambling-related harm?	23

Headline findings.....	23
Software awareness and use.....	25
What software does and how it works.....	28
Software improvements	31
4. The role of software post-GAMSTOP launch.....	34
5. Conclusions and recommendations.....	37
Conclusions	37
Recommendations for GambleAware.....	40
6. Appendix 1: Further details of methodology	42
Components of approach	46
Topic guides.....	47
Topic guide 1: Stakeholders.....	47
Topic guide 2: Problem gamblers.....	51
Topic guide 3: Recovered problem gamblers.....	56
Topic guide 4: Work extension; further questions for developers.....	61
Online Survey Script.....	65
Participant information sheet.....	72
7. Appendix 2: Existing evidence regarding the effectiveness of blocking software	75

Executive summary

Blocking software is one of the tools available to support consumers that wish to limit their capacity to participate in remote gambling, on both desktop machines and mobile devices (e.g. smartphones). Software available to consumers in the UK include those developed in the UK and internationally, and both general software packages (e.g. NetNanny) and gambling-specific software packages may have applications to help problem gamblers block their access to harmful content.

Some operators and treatment providers are already well aware of blocking software and sometimes signpost individuals experiencing problems with gambling to explore whether this might be helpful for them. However, there is very limited empirical evidence surrounding the effectiveness of this software in limiting gambling related harm, both in terms of technical and therapeutic effectiveness.

Given the increasing popularity of remote gambling participation (particularly through mobile devices), GambleAware commissioned this evaluation to understand whether blocking software can prove to be an effective tool to limit gambling related harm, and to explore, through consultation with stakeholders, whether increasing awareness and availability of software might help limit the risk of harm to a wider population.

Winning Moves and partners were commissioned to deliver this evaluation between November 2017 and August 2018. The evaluation included technical testing of software, discussion with industry stakeholders and direct engagement with problem gamblers to understand whether and how blocking software can, or could, be useful.

The definition of gambling-related harm proposed by Langham et al. (2016) was adopted in the evaluation. We defined ‘reducing gambling related harm’ as ‘instances where blocking software had contributed, ostensibly, to a reduction in one or more dimensions of harm identified in Langham’s taxonomy of harms¹’.

¹ Langham et al. define seven domains across which harm can manifest; financial harm, relationship disruption, emotional or psychological distress, decrements to health, reduced performance at work/study, criminal activity and cultural harm. See: [Understanding gambling related harm: a proposed definition, conceptual framework, and taxonomy of harms](#), Langham et al. 2016.

The key findings of the evaluation were as follows:

Is blocking software technically effective in blocking access to online gambling?

- Based on the results of systematic testing, blocking software appears to be generally effective in restricting access to online gambling. Three gambling-specific software packages were tested in the research, alongside three generic content blocking packages. None of the software packages on the market were found to block access to all websites associated with UK Gambling Commission licences; however, one gambling-specific package was found to block approximately 99%². In all cases, access to all of the largest online operators that generate the highest amount of traffic were successfully blocked when blocking software was installed. The gambling-specific package which performed least well still blocked access to approximately 59% of websites, including all of the largest online operators.
- Gambling-specific software also performed well in blocking access to illegal and offshore gambling websites – blocking 80-90% of the sites tested. Software performed less well in blocking access to cryptocurrency gambling websites, but developers are starting to explore ways to improve their software in this respect, and appeared keen and willing to undertake further development as markets and customer demand for specific services shift / in response to policy requirements of Governments and regulators.
- Some respondents who were using blocking software to manage/overcome their gambling problems reported that just having the software installed was enough of a deterrent to attempt to gamble online, with some saying they wouldn't even attempt to do so, fully expecting attempts would be blocked³. Developers are aiming for full product coverage across all operating systems, but at this time the research did identify inconsistencies in the testing results for two packages on different operating systems.
- Gambling-specific software packages were found to be more effective in only blocking access to undesirable content, rather than blocking information that could be helpful where e.g. the word 'gamble' appears in the URL. Gambling-specific software packages also sometimes include ad blocking/additional features. Software is easy to install, and users will typically not know the software is there unless they make attempts to circumvent it.

Is blocking software effective in reducing gambling-related harm, and how does it work?

- The evaluation identified a number of instances that demonstrate software can be helpful in reducing the accessibility of gambling and, in doing so, play a role in reducing gambling-related harm. Benefits derived from use of blocking software were evident in feedback from users and all types of stakeholders interviewed. Several case examples were identified where blocking

² This package blocked 95% of all websites associated with UK Gambling Commission licences, but achieved 99% overall after adjusting for sites where gambling was not possible.

³ For this reason, we suggest care is taken in publishing/reporting on the findings of this study so as not to undermine the opinion that blocking software is 100% effective, where such opinion is held.

software had been reported as useful in helping problem gamblers not gamble or not succeed when attempting to gamble. In doing so, blocking software was reported to be a helpful tool in supporting them to deal with their gambling problems and was said to have played or be playing a role in reducing one or more dimensions of gambling-related harm.

- Primarily, the research suggests that software makes it more hassle for gamblers to access content for the specific device that software is installed on. This may act only to delay a person gambling; they will, for example, participate in another way or find a way around the software. Cases were identified, however, where the hassle factor led to the user having time to contemplate why they do not want to gamble (and so they make a choice not to continue in their efforts) or became bored of trying. As noted above, sometimes software simply being installed was enough that users would not attempt to gamble using the device (so it did not matter whether the blocking software was technically effective in blocking access to all gambling sites). Where software wasn't effective, this appears to be for individuals not yet adequately committed to overcoming their problem/where helping address a 'symptom' of the problem wasn't enough to discourage them finding other ways to feed their addiction.
- Software was not determined to work for everyone / in all circumstances, with gamblers having mixed views about the effectiveness of blocking software. Some had used software and reported it was helpful, for the reasons outlined above, while others using software found it technically ineffective in blocking access to gambling sites, and unhelpful as a result.
- Software was felt by stakeholders to be most effective when used on all devices, to discourage users easily being able to switch devices and still manage to gamble. Users themselves, however, suggested that price was a barrier in some cases to ensuring effective software is installed on all devices. Other gamblers felt installing software on all devices wasn't needed – in instances where, for example, their habit was linked to just one or a couple of specific apps (and they were not interested in exploring other sites/apps to use for gambling).
- Software is not seen to be a standalone solution by most stakeholders (but could potentially be in instances where problem gambling is solely limited to online participation). Blocking software was felt to work best as part of a treatment package tailored to the individual rather than being effective in isolation. Stakeholders also suggested software may be more effective when treatment involves a friend or family-member as well as the user.
- Awareness of software was mixed, with stakeholders suggesting about half of gamblers reaching treatment providers were aware of software as a tool. When gamblers experiencing gambling-related harm are not aware of blocking software it can come as a welcome surprise, particularly to those feeling that they had exhausted all other potential self-treatment methods available to them.

The future for blocking software

- GAMSTOP is expected to be helpful in allowing gamblers to self-exclude from all the registered websites. However, even with GAMSTOP fully operational, this will not prevent people being

able to gamble via sites not licenced in the UK. This is one key reason why most stakeholders engaged within this research felt there is an important continuing role for software as a tool to help problem gamblers. An effective treatment package might include blocking software, GAMSTOP and therapy, and potentially other services e.g. third-party ad-blocking.

- Developers reported intentions to diversify their product offering, with an emerging focus on marketing their software to schools, universities and places of work – e.g. where software is not installed on individual machines, but blocks access for all computers running through a company server.
- There was some appetite identified for a new type of software that limits access to online gambling websites/apps, rather than blocking the content altogether. Stakeholders felt this would be a way for users to ensure that they don't develop problems and can only gamble at designated days/times, helping them participate responsibly and sustainably. This would be another use of software that is distinct from the aims and objectives of GAMSTOP.
- There are some barriers to the use of software currently available. These include:
 - Cost, though some stakeholders noted that charging can be helpful in achieving outcomes by making the user value the investment in the software. Cost could be more of a factor for certain packages and where users wish to install on multiple devices (i.e. more than the number of licences provided with the software purchase)
 - Perceptions about software being easy to circumvent
 - Perceptions/experiences of software not blocking access to some common websites/websites generally.
- All developers interviewed were keen to ensure that software remains relevant and effective to a changing market landscape and evolving demands of consumers; for example, the emergence of new types of gambling such as skin betting.
- Treatment providers⁴ highlighted the valuable role that blocking software could play in signposting a user to further sources of advice and support, something that some developers are considering within their continuous improvement of the software they offer. If treatment providers were able to offer blocking software to more of the problem gamblers who use their services, they could do so on the condition that the gambler also engages with other types of treatment/support. The research suggests that doing this would be likely to improve the outcomes for the gambler in terms of reducing gambling related harm.

⁴ In response to a presentation setting out the headline findings of the research, for feedback from GambleAware and treatment providers.

I. Background

Introduction

Guided by the National Responsible Gambling Strategy, GambleAware is an independent charity tasked to fund research, education and treatment services to help minimise gambling-related harm in Great Britain. GambleAware is a commissioning and grant-making body, not a provider of services. The charity's strategic aim is to broaden public understanding of gambling-related harm as a public health issue and to help those that do develop problems get the support and help that they need quickly and effectively.

Blocking software is one of the tools available to support individuals that wish to limit their capacity to participate in remote gambling. The software currently available on the market includes both gambling-specific software and general blocking software packages. However, there is very limited evidence surrounding the effectiveness of this software in limiting gambling related harm, both in terms of technical and therapeutic effectiveness. Given the increasing popularity of remote gambling participation (particularly through mobile devices such as smartphones),

GambleAware commissioned this evaluation to understand whether blocking software can prove to be an effective tool to limit gambling related harm, and, through consultation with stakeholders, whether increasing awareness and availability of software might help limit the risk of harm to a wider population. In defining gambling harm, this research adopted the [definition proposed by Langham et al.](#) in 2016, which defines seven domains across which harm can manifest; financial harm, relationship disruption, emotional or psychological distress, decrements to health, reduced performance at work/study, criminal activity and cultural harm.

Another software-based solution (an online self-exclusion service) called GAMSTOP was developed by KPMG in late 2017, on behalf of the Remoting Gaming Association (RGA), and was launched in early 2018. This service allows users, via a single registration process, to self-exclude from multiple online gambling sites licensed by the UK Gambling Commission. There are ongoing discussions regarding whether GAMSTOP would render blocking software obsolete, with arguments both for and against a continued need for blocking software once GAMSTOP is live. GambleAware therefore also required the evaluation to explore the degree to which blocking software would offer additional benefits beyond those which will be delivered by GAMSTOP.

The objectives for the evaluation were to determine, as far as possible within the timescale and resources available for the project:

- I. Is the available blocking software technically effective at preventing access to all forms of online gambling? What are the relative advantages and disadvantages of the currently available solutions? Is there any additional functionality (not currently available) that should be developed for such software to be technically effective?

2. Whether blocking software is effective at reducing gambling-related harm; in what circumstances and for whom is blocking software effective at reducing gambling-related harm?
3. Whether software is more effective at reducing gambling-related harm when used alongside other forms of treatment (for example, self-exclusion)
4. Whether blocking software offers additional benefits beyond those which will be delivered by the GAMSTOP self-exclusion scheme, sufficient to make a case for making such software more widely available.

Methodology

Original scope of work

This research employed a mixed-methods approach to addressing the research questions. The research consisted of:

1. **A brief review of existing literature** to understand what evidence exists regarding whether and in what circumstances blocking software can be effective in influencing the participation of problem gamblers in remote gambling;
2. **Testing of software** currently available on the market, to determine the technical effectiveness of software in blocking access to online gambling. Six software packages underwent the technical testing; three packages specific to gambling and three 'general' content blocking packages. Testing established whether it was possible to load each of the 2,417 websites associated with active Gambling Commission licences⁵ on desktop based operating systems⁶;
3. **In-depth interviews with stakeholders**, exploring the views and experiences of treatment providers, gambling operators, academics, and software developers regarding whether, how and in what circumstances blocking software was a useful tool in reducing gambling-related harm. Qualitative telephone interviews were completed with 12 stakeholders in total. All major treatment providers, collectively representing a large number of problem gamblers, were invited to contribute to the research, and most were successfully engaged within the fieldwork period;
4. **Engagement with existing / potential users of blocking software**, to capture feedback from both problem gamblers and those who had recovered from problems, into whether software had been, or could be, helpful in overcoming problems or preventing

⁵ At the time of testing – the list used for testing was extracted in October 2017.

⁶ Due to regulations and technical challenges around how mobile operating systems can be emulated for testing, it was not possible to emulate iOS/Android for the purpose of the full technical test. However, spot-checking the functionality of software installed on the mobile devices was possible.

problems from developing. An online survey was set up to allow people to provide feedback on an anonymous basis, receiving 41 responses across the research period. The survey was promoted by treatment providers who were willing to share the link with individuals known to them who might be willing to provide feedback. Qualitative telephone interviews were conducted with nine individuals⁷ agreeing to talk to us about their experiences in more depth.

Fieldwork was conducted between November 2017 and May 2018.

In terms of whether blocking software is effective in a technical sense (i.e. restricts access to online gambling websites), we were able to test a range of software packages that the developers very kindly provided access to. Software testing was conducted using versions of software for which licences were supplied, in parallel with the fieldwork period. Newer versions of some software packages are already available, and it is possible, therefore, that some limitations described in our report may have since been addressed. We have endeavoured to ensure the contents of our report are factually correct at the time of writing.

The study adopted a case study approach in exploring and understanding the therapeutic effectiveness of blocking software, rather than attempting to adopt an experimental or quasi-experimental approach. It was decided to adopt a case study approach, supplemented by stakeholder feedback, on the basis that:

- Understanding whether blocking software can reduce gambling-related harm requires opportunity to observe (or not) the benefits over several months/years. The timescale available for this study precluded longitudinal observation;
- Blocking software is an umbrella term for several packages, each of which can be configured in various different ways, and each of which is being continually developed and improved. Blocking software may be used in a wide variety of different circumstances by people from all walks of life, each of whom may have differing triggers/motivations for using the software. Such heterogeneity makes it:
 - Difficult to construct a trial that fairly and adequately tests whether and to what extent using blocking software reduces gambling-related harm; and, therefore,
 - More desirable and appropriate to examine causation adopting a generative framework for causal inference.
- Identifying instances in which blocking software had, ostensibly, in the views and experiences of both software users and wider stakeholders⁸, contributed to a reduction in one or more

⁷ It was hoped we would be able to engage more than nine individuals to participate in in-depth interviews; however, due to several challenges encountered in identifying and engaging respondents this was not possible. This is noted here for GambleAware to highlight the challenging nature of researching this area in future.

⁸ Such as treatment providers

dimensions of gambling-related harm was confirmed within the proposed methodology as sufficient evidence that blocking software did work, in at least some circumstances. In the first instance, therefore, the study sought to confirm such cases existed. We then sought to understand more specifically how and why the use of software had helped in circumstances where this was reported to be the case. We also explored instances where blocking software had not been effective, to understand the circumstances in which this was the case and why it had not worked in those cases.

- We could not attempt to assess how many people software works or does not work for within the scope of the project without compromising other work elements; rather, we sought to confirm that it has proven helpful in some circumstances i.e. to confirm whether blocking software has the potential to reduce gambling-related harm.

The approach employed was developed with GambleAware and, although not without limitations, deemed to be the most effective use of the available budget and the most likely approach to provide satisfactory evidence in the available timescale.

In exploring the therapeutic effectiveness of blocking software, the study sought to answer the following questions:

- Are there instances where blocking software has, ostensibly, 'worked'/not worked?
- What happened in those instances, and what were the circumstances in which the person was using blocking software?
- How did the software help (if at all), and to what extent did it help?
- Was using the software sufficient (by itself, or in conjunction with other things) to reduce gambling-related harm?

It is important to acknowledge that we did not seek to undertake a systematic assessment of whether blocking software reduces particular types of harm; instead, we sought evidence of case examples where gambling-related harm had clearly been reduced and where this was attributed (at least in part) to use of blocking software, to be considered alongside the results from the technical testing.

Users and potential users of blocking software participating in the research did so on an anonymous basis. In terms of understanding the gambling-related harm, it was not possible to explore this in full depth with problem gamblers and those 'at risk' (due to this being a sensitive and difficult topic that some individuals were not willing to talk about at length), but we present the evidence that could be collected within the results.

Further details on the methodology can be found in Appendix I, including the topic guides for the primary research.

Work extension

Following review of the first draft of this report, it was agreed with GambleAware to extend the research to explore the following:

- Effectiveness of blocking software in blocking access to illegal⁹ and offshore websites¹⁰
- Current ability of software to block advertising
- Ease of ensuring that software remains relevant and effective as new websites emerge.

The extension required further engagement with developers and further technical testing. This work was undertaken in July and August 2018.

In the process of developing a sample of illegal and offshore websites for additional software testing, the work was discussed with the Gambling Commission. They highlighted a growing interest in understanding the degree to which available software currently blocks access to cryptocurrency gambling websites, and so the final round of testing incorporated a sample of cryptocurrency gambling websites.

This report

This report is structured as follows:

- **Section 2** outlines the technical testing, and provides the results of our assessment of whether software works technically.
- **Section 3** outlines the primary research, drawing on data from the primary research elements, summarising all findings and feedback received from stakeholders, and directly from gamblers, regarding the actual and potential therapeutic effectiveness of blocking software.
- **Section 4** discusses the future role of blocking software now GAMSTOP is operational.
- **Section 5** provides conclusions and recommendations.

Throughout the report we have included a selection of case examples of gamblers engaged by the research.

⁹ Gambling sites that are not licenced to provide participation to UK consumers.

¹⁰ The original technical testing examined whether software allowed access to all domains associated with active UK Gambling Commission licences, many of which are hosted from outside of the UK. This component of testing examined whether software blocked access to sites not providing access to UK consumers (but that it might be possible to access).

2. Does blocking software prevent access to online gambling?

In this section we outline the software packages available on the market, how the software works, the testing that was undertaken to determine how effective blocking software is at preventing access to online gambling, and the findings. To maximise participation, software developers were invited to participate in the research on the basis that published test results would be reported anonymously, though attributed test results will be provided to GambleAware separately.

Overview of software available on the market

At present, there are two main categories of products available on the market:

1. **Gambling-specific blocking software.** Three main products dominate the market in the UK (Gamblock, Betfilter and Gamban) and were tested within this research. At the time of testing, at least one other package (Betblocker) was in development that the developers intend to be available to UK consumers
2. **Non-specific content filters.** These include software packages that allow users to limit their own access to specific content (the focus typically being on increasing productivity by blocking access to 'distractions'), or that allow those responsible for others to control and limit access to specific types of content (e.g. blocking access to pornography or other undesirable materials). Three packages were tested¹¹, though it should be noted that this does not include the market leader, (NetNanny) who were engaged but declined to participate in the research. At the time of testing, another software package (NetSweeper) had contacted GambleAware, though it wasn't possible to test this within this research

All seven of the products tested in this research were provided free-of-charge by the developers.

What blocking software does and how it works

All types of blocking software tested in this research are intended to completely block access to specific types of web content. In the case of gambling-specific software, developers intend for the software to block access to online/mobile gambling participation websites, while still allowing users to access helpful gambling-related content, such as information relating to the methods/services available to treat or prevent problems. For proprietary reasons, developers of gambling specific software did not wish to divulge full details explaining exactly how their software achieves the outcome of blocking particular websites. However, based on testing and information that could be divulged, blocking software often works based on a combination of blocking a specific list of domains

¹¹ A fourth was also tested, but it was found to block access to all web content when enabled (without configuration), and so test results have been omitted.

or sites (which can be regularly updated, and aims to exclude specific exceptions e.g. helpful content), blocking URLs that contain specific keywords, and/or using specialist algorithms to identify whether a website contains content that would allow people to gamble. At least one of the general blocking software packages appears to block at least partly on the basis of keywords, as during the testing the software it was identified that any sites containing 'gambl-' or 'bet' were blocked, resulting in some sites containing helpful content being blocked as well as sites through which gambling activity was possible.

At the time of writing, all gambling-specific software developers who submitted software for testing have either successfully launched, or are in the process of developing and launching, blocking software for the various different platforms via which people gamble remotely – Windows, Mac OSX, iOS (iPhone), and Android. Several developers noted that their products may work slightly differently and/or perform more robustly on specific platforms, though all are aiming for seamless and consistent performance across all platforms.

The core testing of how well software blocks access to active Gambling Commission licenced domains was conducted between January 2018 and May 2018 on all platforms that products were provided for by the developers, with the exception of mobile platforms. Due to the way that developers manage / mandate how operating systems can be used / simulated it wasn't possible to emulate an iOS or Android testing environment for the purpose of this research. However, in all cases, developers confirmed that the way packages operate, in terms of the content they block access to, is based on how products perform on desktop operating systems. Therefore, the results of desktop testing that are included below should provide an indication of coverage and functionality on mobile platforms. Developers with mobile products informed us that these block access to both browser content and app related traffic. While this could not be tested exhaustively within the research, some spot-checking of common gambling and gambling-help related websites were conducted using company mobiles which confirmed that the software that were available for mobile devices did indeed block access to mobile gambling websites and apps¹².

Additional testing which sought to determine software effectiveness in blocking access to illegal, offshore and crypto-gambling websites was undertaken in July and August 2018.

In terms of user experience, the majority of software operates 'in the background', meaning that the user will not know that the software is there until they try to access a particular website. When trying to access blocked content, the user will be diverted to a page that informs them that the content has been blocked. Typically, the page will load but then, after a split-second, the content will disappear, being replaced by a screen that informs them that content is blocked.

¹² While it was possible to install gambling apps onto mobile operating systems, attempting to use the app to register or login caused the app to freeze, and therefore gambling was not permitted.

Additional functionality

All of the three main gambling-specific blocking software developers were pleased to support this research exercise. In all cases they stressed that product development is ongoing, with developers actively seeking ways to ensure that software cannot be circumnavigated by the user, alongside exploring whether software can be helpful in addressing emerging forms of participation akin to gambling/other things not related to gambling e.g. spending money on trading/cryptocurrency. In addition, some developers are beginning to explore the role of software in blocking access to skin-betting, and other forms of 'pseudo'-gambling that are possible within video games / through distribution platforms such as Steam. It is hoped eventually that when a user installs the software, they will be able to opt-in to which types of gambling content they want to block (e.g. by game, betting, cryptocurrency, skin betting) and whether they would like additional functionality enabled – e.g. ad-blocking (see below for discussion of this).

At present, only one gambling-specific package tested includes functionality to block in-browser (including in pop-up) advertisements, and advertisements embedded in media (e.g. videos within a browser). It is not possible for the software to only block advertisements relating to gambling; the software blocks all advertising through identifying any outgoing and incoming traffic to the servers operated by advertising companies. This developer did not encounter demand for this functionality from their users; rather, it was a request from a gambling operator who were keen for this functionality to be included. Another developer is keen to incorporate ad-blocking, but at the moment they don't think it is acceptable that all adverts will be blocked, and they are concerned about advertisers taking issue with the software were that to be the case. They are considering signposting towards/partnering with a third-party ad-blocking software provider, identifying it might be useful for the user and should they wish to purchase a separate ad-blocker they would recommend visiting the third-party provider's website.

Ease of installation

There were no challenges in installing any of the software packages tested, with instructions for installation and the installation processes being simple to follow.

Ease of uninstallation

As is to be expected, all of the gambling-specific packages tested are difficult to uninstall, sometimes requiring a specific uninstallation key that can only be accessed by contacting the developer. In agreeing to install the software, users typically need to agree to an end-user licence agreement which sometimes asks them to agree that they won't attempt to uninstall a package within the licence period. This sometimes leads to quarrels with developers when there are 'genuine' reasons for needing to end a licence early/uninstall software, but the way that developers manage use of their software adds an additional layer of protection to the user in that they make it difficult to remove the software.

For one software package, if attempts are made to remove the package then it will notify the software server which will attempt to reinstall the software. This developer noted that a typical consumer would not be able to disable this functionality, though there are inevitably some methods that those very savvy with tech/networks might be able to; these are noted later in this chapter.

This developer also noted they have recently implemented changes that mean software makes itself an administrator on a mobile device which means that by default the user will not even be able to see the files they would need to delete to remove the software. Developers did however note that it is challenging to implement all functionality for mobile devices as there are so many different versions (particularly for Android devices) but that they are making progress in ensuring the same features are available whatever the make and model of phone has the software installed.

One developer has so far implemented functionality that notifies the user via emails/text sent to the registered user to advise that attempts are being made to uninstall the software. This developer is also exploring whether to encourage users to nominate a family member or friend that would also be notified when attempts are made to uninstall the software, suggesting they check in with the user. They are also in the process of building links with regional treatment providers so that when attempts to uninstall the software are made, the user is encouraged to contact the treatment provider if they are experiencing difficulties in overcoming their problem gambling.

One software package will force the machine to restart to interrupt what the software perceives to be risky behaviour (e.g. repeated attempts to access blocked sites). This typically means the user will not be able to complete uninstallation of the software before the computer shuts down and stops them in progress.

Technical effectiveness of software

Core technical testing

All packages that were tested were installed and tested 'off the shelf' i.e. without configuration. Developers noted that the gambling-specific packages tested are designed to work 'off the shelf', though on first use they can prompt the user for input in relation to whether the software should try to block access to other things besides sites where gambling activity is possible.

In each case, testing established whether it was possible to load each of the 2,417 websites associated with active Gambling Commission licences¹³ on desktop based operating systems. Testing results for the packages are included in the table below.

Findings are provided anonymously, as was agreed with developers to encourage participation. Where a range is provided, this indicates that testing was completed on more than one operating system and differences were found in blocking coverage between operating systems. All tests were run using a variety of internet browsers with additional plugins (e.g. ad blocker) disabled. Testing was automated using a script to attempt to load each website associated with active Gambling

¹³ At the time of testing – the list was extracted in October 2017

Commission licences¹⁴, then record the outcome of that attempt in a spreadsheet for further analysis.

Table 1: Results of core technical software testing

Software package	% of active websites licenced by UK Gambling Commission that software blocked access to
Gambling-specific software	
Package 1	58.5%
Package 2	69.7% ¹⁵
Package 3a (first test)	59.8% - 72.1%
Package 3b (second test)	94.8% - 95.8%
General software	
Package 4	56.1% - 59.5%
Package 5	0.6% ¹⁶
Package 6	61.2%

Package 3 underwent a second round of testing because a new version with substantial improvements was launched only slightly too late to include in the original testing.

The table above shows that:

¹⁴ 2,417 websites were included in the test, based on an extract of websites associated with licences taken from the Gambling Commission taken in October 2017.

¹⁵ With this software, for every few websites that the automated script tried to visit, the machine would then restart because the software builds in this functionality to interrupt the user's behaviour, where 'risky' behaviour is identified. For this reason, we only manually tested approximately the first ~10% of sites in the list and the full automated test could not be completed. 69.7% represents the success rate for just the websites that were manually tested.

¹⁶ When researching packages to test, engagement with this developer suggested that blocking gambling related content was something they received demand for (and possible through their software), though these results confirm that the software was not designed for this purpose off-the-shelf.

- None of the packages achieve 'full' blocking coverage, though one achieves ~95%. Five of the packages achieve blocking effectiveness of ~60% when the list of webpages associated with active UK Gambling Commission licences were attempted to be accessed;
- There are differences between effectiveness of software with versions for both MS windows and Mac OSX;
- Off the shelf, one of the 'general' packages performs particularly poorly in comparison to all other packages that were tested; it should however be noted that this package is marketed as a study/productivity aid rather than primarily as a content blocker.

From our analysis and spot checking of the sites that are not blocked, these sites include:

- Sites through which it is possible to gamble online i.e. content that *should* be blocked;
- Sites that contain information relating to gambling, but do not allow gambling directly through the site; for example, odds trackers or news sites relating to sports activities and betting;
- Websites that only occasionally host gambling related activities e.g. charities, that run an occasional raffle or lottery;
- Some vacant URLs that are no longer in use, but which are currently hosting live content (usually explaining they are currently available for purchase). URLs not in use that returned 'page not found' errors in control tests with no blocking software installed were excluded entirely in calculating the percentages reported above.

When we incorporate this analysis of the nature of sites not blocked with the data from Table 1 for gambling specific software¹⁷, we can provide a quantitative estimate of the proportion of sites that are not blocked by software *and* would permit a visitor to gamble.

Table 2: Proportion of sites not blocked by gambling-specific software that would permit a visitor to gamble

Software package	% of active Gambling Commission licenced websites not blocked by software that would permit a visitor to gamble
Package 1	24.0%
Package 2	2.9% ¹⁸

¹⁷ This analysis was completed following provision of the first draft report, at which point we had already recommended that the non-specific blocking software was likely to be of less value to problem gamblers.

¹⁸ For only the websites that were manually tested; see previous footnote regarding Package 2.

Package 3a (first test)	24.1% - 17.6%
Package 3b (second test)	1.0% - 0.6%

While some sites that allow gambling were still accessible with software installed, all of the largest high-street and online operator's sites are blocked by the gambling specific software, and we determine therefore that most online participation would be blocked by the gambling-specific software packages that were tested¹⁹. The gambling sites that could still be loaded with blocking software operational on the machine appeared to be sites specifically for online gambling (i.e. where there is no 'high-street' bookmaker presence in the same name).

It should be noted from follow-up calls with developers that all of the gambling specific software developers would be able to ensure that the list of sites associated with active Gambling Commission licences would be blocked by their software. They would add the list URLs to the list of sites to block, and the list could be checked for additions/omissions on a regular basis to ensure full blocking coverage.

Additional technical testing of gambling-specific packages

While tests were conducted against active UK licenced websites, one of the difficulties in helping problem gamblers block their access to websites is the ability to participate through gambling on international websites (be they illegally providing a service to UK consumers, or those that it would be possible to access by spoofing a change in location through a VPN). In addition, cryptocurrency gambling has emerged in the past few years and the Gambling Commission were keen to understand whether software blocked access to these types of websites. A database of 121 illegal, offshore and cryptocurrency gambling websites was built and used for testing the effectiveness of the gambling-specific software packages. The results of testing are shown below.

Table 3: results of additional technical testing – gambling specific software only

Software package	% of illegal websites blocked	% of offshore websites blocked	% of cryptocurrency gambling websites blocked
Package 1	84% – 90%	88.1% - 92.9%	54.8%
Package 2	94%	61.9%	79.3%
Package 3	98%	95.2% - 97.6%	62.1%

¹⁹ It may be the case that the fact that the biggest household names were blocked then encourages people to identify and access more obscure online operator only websites, but this wasn't something identified within the research.

This testing demonstrates that all of the gambling-specific packages perform well in blocking access to the sample of illegal sites tested. Two of the packages perform highly in blocking offshore sites that would only be accessible in the UK by using a VPN, while one package performs slightly worse. Two packages perform poorly in blocking cryptocurrency gambling websites.

Blocking helpful content

In testing whether the software packages blocked access to helpful resources – including GambleAware’s website – we found that gambling specific software packages allowed access in all cases. However, all of the general packages blocked access to at least some of the resources that could assist gamblers in overcoming their problem.

As noted above, some spot checking of mobile versions of software was conducted (for two packages available for iOS devices). These spot checks identified that the gambling specific software packages tested blocked mobile browsing and apps and did not block helpful content.

Ways to circumnavigate software

Developers of gambling-specific software reported that they are always seeking ways to improve their software and reduce the methods that gamblers can use to circumvent the controls the software puts in place. Due to issues identified and concerns raised over recent years, gambling-specific software developers reported that most ‘common’ methods of circumnavigating software will not allow users to bypass the function of blocking software (even when developers acknowledged that this may have possible historically).

Based on feedback from software developers and our own testing, techniques that should not allow the controls of the software to be circumnavigated are as follows:

- Bypassing software using task manager
- Stopping software during start up
- Using a proxy website
- Using TOR or similar anonymity networks
- Using a Website IP Address to Bypass a Web Filter.

Potential methods via which software might be circumnavigated have been reported to Gamble Aware in confidence, as it would be perverse for the study to advertise these methods.

Relative advantages and disadvantages of software

As discussed above, one of the drawbacks with general blocking software was that it was sometimes over-sensitive and blocked content which may be helpful to problem gamblers. This was not an issue that was identified for the gambling specific software.

In terms of comparability of the gambling-specific software, all packages blocked access to most of the gambling websites that account for the bulk of online participation. Even though there were differences in the proportion of active Gambling Commission licenced domains blocked, all software will likely block the websites that most UK customers would most frequently access.

One of the key differentiators between packages is cost – while one package is low cost, the others are relatively more expensive, particularly if blocking is required for multiple devices. However, the paid-for packages do tend to offer additional functionality (such as the ability to be blocking other things, the forced-restarting feature that occurs when repeated attempts to gamble are made, and ad-blocking).

Continuous improvement

All developers reported their processes for continuous improvement, and that, for example, they are hoping that where differences in blocking coverage are currently found between operating systems, that they are working to ensure that performance is seamless and consistent irrespective of platform.

All developers were willing to continue exploring ways to integrate additional features (e.g. ad-blocking) and ensuring that software remains applicable to changes in the market landscape and nature of gambling – e.g. through exploring ways to integrate ways to block skin betting and cryptocurrency gambling.

3. Can blocking software reduce gambling-related harm?

This section draws in findings from all streams of the primary and secondary research to examine whether software can be effective in reducing gambling related harm. This includes evidence from problem gamblers themselves (whether currently experiencing problems, being ‘at-risk’, or having recovered), and evidence from range of stakeholders who were engaged within the research, including gambling operators, developers and treatment providers.

A number of case examples are included in this section alongside the narrative, highlighting people for whom software was / wasn’t effective, and why this was the case (as far as can be understood from the available evidence in each case).

The literature review did not yield any evidence regarding whether/how blocking software might reduce instances of gambling related harm; however, findings from studies reviewed did indicate that:

1. Content filters can be technically effective in limiting access to specific types of content (with one specific study finding content filters could be 90%-94% effective at their most restrictive setting).
2. The way in which some content filters work means there can be a risk of blocking access to information designed to help people with issues relating to the content they wish to block.

Further details of the literature review can be found in Appendix 2.

Headline findings

Overall, the research has identified the following:

- **By limiting gamblers’ ability to access the content which is contributing to their problems, blocking software can reduce gambling-related harm; and there are many cases where it has, ostensibly, done so.** Most stakeholders were able to point to individual cases and examples in which blocking software had been useful in helping individuals deal with their problem gambling, or reduce the risk of problems developing. Interviews were successfully conducted with a number of problem gamblers that provided examples of software being helpful in overcoming their problems.
- **The effectiveness of blocking software is to some degree dependent on the willpower/commitment of the individual.** Stakeholders and gamblers expressed that, if a user is committed to getting around software or is not committed to dealing with their problems, software tends to be less effective. Most feedback received suggested people needed to be accepting of their problems and want to overcome them for blocking software to be effective. Stakeholders and gamblers interviewed in the study also expressed that, where use of the software is not necessarily the choice of the user or they aren’t ready to address their

problems, they are more likely to seek ways to get around the software or attempt to remove it. Treatment providers, operators and academics stated that much is down to the individual and they cannot install the software for a user and cannot take the role of e.g. a parent; the user needs to remember why they have the software installed for it to be effective. Developers echoed this and were able to cite examples of customers both benefitting from using software alongside strong commitment from themselves to recover, and not experiencing benefits when they weren't invested / ready in addressing their problems.

- **For software to be most effective, it needs to be installed on all users' devices that are associated with the problem.** Treatment providers and operators stressed the importance that a gambler cannot simply switch to a different device within the comfort of their home, or access online gambling when away from home e.g. at work. For this reason, software was experienced to be most effective when installed on all of a person's devices. This was also echoed by developers. Some developers are currently actively working to allow versions of the software to be implemented in workplaces and universities that mean that employees/students are unable to access content when in the workplace or place of study. However, insights from gamblers themselves suggest that sometimes problems can be limited to one mode of play e.g. a specific app on a smartphone, so if installing software on multiple devices will carry significantly more cost, it may only be necessary to install on devices that are associated with the problem. The research did not find examples where people had switched from e.g. desktop computer to mobile device to bypass software and enable continuing participation, though this was felt to be likely to sometimes occur by stakeholders.
- **Blocking software may be more effective where a friend or family member of the gambler are involved in treatment.** This may be down to the user not wishing to let their friend or relative down, or simply having the additional support from a friend or family member who is invested in them achieving beneficial outcomes for themselves.
- **In instances where software was reported as beneficial in addressing harm, several key mechanisms were identified.** These included:
 - The time taken attempting to gamble allows the user to remember why they want to stop/the reasons they installed software, and they choose not to continue in their attempts to get around software;
 - The efforts taken in attempting to load a website and software making this impossible lead the individual to lose interest – it's 'too much hassle' to try and gamble on that device;
 - Just having the software installed is enough for the user not to attempt gambling online using that device. They believe that they can't gamble anyway even if they wanted to, and trust that software will block any of their attempts to try on that device.
- **Blocking software is not a 'magic bullet' and works best in partnership with other treatment methods (including therapy and self-exclusion).** Evidence from stakeholders

and gamblers themselves highlight that every individual is different and may have problems with a range of different activities related to gambling. Blocking software is effective in limiting online/mobile participation, and in some instances where users are not reminded about gambling because they can't access online content, this can help reduce their participation via other means. One stakeholder expressed concerns that blocking software (and self-exclusion) only addresses the symptoms rather than the cause of the problem, and other approaches/services were needed to help understand and treat the underlying issues that result. Therefore, they felt that the focus for GambleAware and treatment providers should be on whether software has a role in helping people maintain responsible/sustainable patterns of play.

Most stakeholders reported that blocking software should be one component of a treatment regimen where online/mobile participation is a part of the problem, but that incorporating other methods (e.g. self-exclusion, and therapy) were also important in ensuring a 'belt and braces' level of comprehensive treatment. Unless a gamblers' problem was solely with online gambling (in which instances software might work in isolation) then users should seek to combine use of software with other treatment methods. Stakeholders suggested software is most likely to be effective as part of a tailored recovery package for the user, where both the triggers to gambling are well understood, and the ambitions and hopes of addressing gambling problems are paramount and visible for the gambler.

Software awareness and use

Awareness of blocking software within the gambling population was felt to be variable. One treatment provider reported that about half of the people they help treat had already been aware of software and/or may have looked into this themselves, whilst the other half hadn't heard of software and its existence could sometimes be quite revelatory for the gambler; for example, one gambler explained that they felt that they had tried 'everything' over the years, and were quite excited and enthusiastic to use software in the hope it would help where other things had failed. All treatment providers were aware of software as a potential tool to help problem gamblers.

Developers and treatment providers reported instances of people using software over months and even years. They identified cases of users continuing to use software as a 'precaution' even after problems with gambling had ceased, whilst some users will use the software for a fixed term (e.g. 12-month licence period) after which the user will uninstall the software/software will cease to work. Developers reported instances of users not continuing to use software and then later reinstalling it, either because problems returned or because there was concern that they would do so.

Stakeholders were able to discuss the changing manifestation of problem gambling, linked to shifting changes in participation from in-person to online modes of play. Online/mobile gambling offers privacy and convenience to a gambler that are not found with in-person participation. Gamblers and treatment providers discussed that the emergence and growth of online/mobile participation had meant problem gamblers are now more likely to be able to keep their problems a secret and hide participation from friends, loved ones and employers. One gambler noted that blocking software,

too, can be a discreet method for users to try and address their problem, without the need to register their personal information with operators (as would be the case with self-exclusion).

Below we discuss the findings from the online survey and qualitative interviews with online gamblers. It should be noted that the online survey was promoted by two treatment providers and the developers, and precise referral channels are not known. However, responses indicate that most of the survey participation arose from treatment providers encouraging people to take part²⁰.

The headline findings from the online survey were as follows:

- Most participants were those who were currently experiencing gambling problems or were concerned they might be developing a problem. This means that the findings consider whether software is useful in both a preventative and/or a treatment role
- There were equal numbers of respondents who felt that blocking software could be an effective tool in helping limit access to online gambling, and those that did not or were not sure. Those that didn't think software was/would be effective cited the reasons being that:
 - Software does not block access to the content they are trying to access (based on some direct experience, but mostly on perceptions e.g. talking to friends or something they've heard)
 - Software is too easy to circumvent e.g. turn it off easily, factory reset computer (mostly based on perceptions)
 - Not being able to gamble remotely had encouraged the user towards other means of feeding their addiction e.g. in-person participation (one user's actual experience)

The above findings demonstrate mixed views in relation to blocking software, but highlight a range of perceptions about software that are not necessarily accurate. Those users who had installed and used software themselves generally reported they would recommend the software to someone else, even if the software was not perfect and did not block access to 100% of sites.

Case example 1: Female A doesn't see herself as a compulsive gambler, rather she thinks she is at moderate risk of financial and associated emotional harm – though she does say that sometimes her behaviour frightens her. She has been using a free general content blocker on her PC for two months and has had a positive experience so far, though the package being free does mean there are some limitations which she wouldn't expect if she were using a gambling specific package. In terms of benefits she reports that it successfully blocks gambling websites and odds checkers – which she needs most help with – and it helps remove some of her compulsive behaviour: but it isn't impossible to get around, as it is possible to enter a password to get around the blocking but this step/ process interrupts the compulsion and presents time for reflection *"If I'm watching a game I can check the*

²⁰ Opinions are mixed on whether software is effective, which does not suggest that traffic was driven by developers.

odds, with the blocking software it comes up with an error message, so you have to put your password in, I'd say 2 out of 3 times it stops me from gambling, I think I can't be bothered with that" "it's a little reminder...buying yourself time to think makes if feel a little less compulsive".

However, the software she uses can block things unnecessarily e.g. support sites, news articles relating to gambling. Because it is possible to switch the software off using a password, for this solution to work she has needed a change in mind and willpower to ensure that she doesn't just switch it off when she wants to gamble. She also found that the software didn't work 'off the shelf' and settings did need to be adjusted to make it more sensitive and this she feels could be tricky for some (though not her). She feels the big barrier to using another software package would be price, and she thinks a rolling licence subscription would just mean another bill and therefore more stress, and she thinks that if she forgot to renew then she might easily slip back into gambling. For her the free software is working, but it requires commitment on the part of the individual to not just switch it off. She doesn't think that blocking software would work on its own, and she uses software alongside spates of therapy and active participation in self-help forums engaging with others who share similar problems.

Case Example 2: Female B is trying very hard to address her gambling addiction; and is currently on a treatment provider's course (12 weeks including residential care). Physical participation is one part of her problem and she has self-excluded from betting shops. She has found this to be useful and has repeatedly returned to them to request extensions to breadth of geographic coverage. But if she's so minded, she'll just travel further to avoid self-exclusion shops so that she can gamble.

She does have a problem with remote participation on her smartphone and has tried various (general) blocking software solutions, none of which have worked well for her. She began by trying to install parental controls on her broadband and was very disappointed with what her broadband provider could offer, which was very little in terms of parental controls e.g. couldn't block games, gambling websites. She's tried to install parental controls on her smartphone, but this seemed like a long and complex process for her (her friend had to come and help her) ...and it's actually resulted in her being locked out of app stores generally. She tried one general blocking software package on her phone but found that it doesn't block desired content (games and ads still get through) and blocks things unnecessarily e.g. under 18 films, gambling therapy websites. She is now at a point that she is considering getting rid of her smartphone altogether. She has recently investigated some of the gambling specific packages and she is hopeful that one of these might work for her, she isn't sure which developers provide blocking for Android phones. Price is however a clear barrier for her, and she is nervous about being able to find the money to purchase an expensive licence, particularly before she is sure the solution will help.

What software does and how it works

Several stakeholders and gamblers commented that blocking software, in itself, did not address the root cause of a problem *per se*; with some expressing feeling that blocking access to content was a 'blunt' instrument (i.e. blocking all access outright) designed only to limit the capacity of users to access the content which was causing them problems.

One stakeholder felt that, for this reason, blocking software should not be a prominent part of the 'treatment' landscape, and that developers should be focusing on allowing people to gamble sustainably/responsibly, rather than blocking their access altogether. However, overall, all stakeholders acknowledged that where people are at risk of or experiencing gambling related harm, that blocking access altogether was a technique that worked in at least some circumstances in helping eliminate the harm that can be experienced.

A couple of stakeholders reported that, due to the growth of mobile participation allowing users a vast array of channels to participate through, 'blunt' instruments like software that block all access were required. In addition, treatment providers and operators mentioned the fact that many online gambling websites and app providers are based outside the jurisdiction of the UK Gambling Commission; insofar as it is technically effective, blocking software could be one of the only tools that ensures that gamblers can't simply continue gambling in a problematic way by visiting international websites. One developer reported that GAMSTOP meant that individuals could exclude from participating with UK based operators, with blocking software helping 'fill in the cracks' which included blocking access to internationally hosted platforms. Developers also highlighted that blocking software might be used by organisations who want to restrict access via their system, rather than the individual installing it on their machine.

In terms of how the software works, stakeholders and gamblers presented the following views/details of what software meant 'for them', which demonstrate a range of effects, experiences and mechanisms associated with use of blocking software:

- Blocking access means immediately limited access to online participation for the user on the device(s) on which software is installed, and the user is notified that their attempt to gamble has been blocked.
- In some cases, this might simply delay the gambler being able to gamble, or change the mode/location of play, but this can itself present time for the gambler to think about what they're doing and remember why they installed the software in the first place i.e. they don't want to be gambling or want to limit how often they gamble. Some then stop attempting to gamble because they remember they don't want to.
- Several users and stakeholders reported that software acts by making it more hassle for users to participate. If they can't participate on their primary device (and any other devices), their options are limited to using someone else's device or gambling outside of their present location. Some stakeholders and problem gamblers reported that in this case it is the hassle factor means that people will give up trying, having realised that they can't easily access the content they are trying

to access (so this doesn't necessarily negate the desire to gamble, they simply lose interest in trying altogether).

Case example 3: Male A says he is still struggling with his gambling addiction and feels that he's tried everything to try and beat his problem, which causes him money issues and associated anxiety/emotional struggles. Over the years he has tried various strategies, including therapy, group counselling, self-exclusion and blocking software – he thinks that they all have their role to play, but none are infallible, all have weaknesses that can be exploited. For this reason, he relies on multiple different things to make up his treatment/recovery programme. In his experience what blocking software does, much like self-exclusion, is provide a practical barrier to gambling – he thinks that other forms of help (e.g. therapy) are more about trying to address the emotional root of the problem – from his experience the practical barrier that comes from software i.e. not being able to access gambling websites 'immediately' is a help. He knows software isn't treating the root of the problem, but that's where things like therapy have a role.

With every blocking software package he's tried he's always found a way to get around the filters if he's so minded, but he thinks they bring a great deal of value in that even increasing the amount of time it takes to find a website that isn't blocked is time that is spend thinking about whether he actually wants to go through with it or not. So, the software can at worst delay/interrupt the compulsion, and at best remind him that he shouldn't be trying. He currently uses dedicated specialist blocking software for gamblers rather than a more general content filter; he has used content filters in the past but found that they can block too much other online content (including helpful information relating to overcoming gambling addiction). As well as using software, he has self-excluded "*from 100s of sites*" ...but like blocking software he recognises that this is only partially effective – "*as there are always new sites cropping up that you aren't excluded from*". He doesn't think software can work in isolation – he doesn't think anything can, as addiction is such a complex and multi-layered issue and problems can manifest in different ways.

- For some, the act of accessing online content is itself reinforcing the problem. By not being able to access content, some users reported that they were less frequently reminded of the activity. Stakeholders suggested that over time this could lead to gamblers experiencing fewer urges to participate, though no cases were identified in which this had occurred among the case examples explored in this study.
- For some users, just having the software installed is sufficient to discourage users trying to gamble – they never actually try and access blocked content because they know and trust that they won't be able to. So simply having the software installed is helpful, even if the software isn't doing anything (that the user is aware of).
- Features relating to blocking advertisements were not frequently reported as important functionality for software. While some did cite that not seeing adverts could remove triggers to gamble, some software users didn't think that adverts were enough of a trigger anyway. A couple

of users would, however, like to see software do more to block advertising within browsers and multimedia content (e.g. YouTube videos).

- One gambler felt that where online gambling problems are short-term and/or felt to be minor (e.g. they only have a problem infrequently when intoxicated), blocking software could be effective in isolation. However, this contrasts with the views of the treatment providers who might perceive this to mean that the root of the problem may not be addressed.

Case example 4: Male B developed a short-term problem gambling online, based on the hope that he could generate some income from gambling. He identified he had a problem and discussed how to overcome this with family. He went on to install a gambling-specific blocking software package, and the low cost of the software means he will keep this installed, even though he now considers that he no longer has a problem with gambling (and no longer gambles altogether).

When he recognised he had a problem and had spent large amounts on gambling (experiencing financial harm), one of his parents originally suggested he install blocking software. In his mind he knew that he was in trouble and needed to address the problem, and addressing the problem meant no longer gambling. The software provides peace of mind that even if he has a lapse of judgement and were to try and gamble, he wouldn't be able to. He has not tried to access any online gambling websites since realising and accepting that he had developed a problem. He does not consider himself to be a problem gambler, rather someone who experienced a short-term issue due to bad judgement, and for the low annual cost of the software he chooses to keep the blocking software installed to make absolutely sure there is no risk of him getting in trouble because of gambling again.

- Gamblers and stakeholders reported that for many problem gamblers, not being able to feed their problem can itself make the user feel happy and elated, which helps reinforce their mindset in wanting to overcome gambling problems and that they are being successful in doing so. Often there is an emotional element to the response (e.g. knowing they aren't causing loved ones emotional or financial harm) which also contributes to the reinforcing element of software use.
- Overall, stakeholders report that the act of blocking is at worst delaying harm, but at best providing an effective approach to eliminating harm from happening; if e.g. the person is at risk of harm but loses interest, the harm doesn't occur, even though the root of the problem and what lead to the user trying to gamble cannot be addressed by software.

Gamblers who were interviewed also reported:

- That software can work best in partnership with other methods; where other methods were yet to be in place and online participation wasn't the only part of the problem, problem gambling was not completely addressed.
- That use of software does require willpower and commitment from the user; several people noted that recovery was 'down to me' and if they weren't committed to recovering, then they would be more likely to ignore the software

- That there was appetite for different versions of software to help people gamble responsibly, rather than blocking access altogether.

These findings correlate with several of the views put forward by stakeholders. One developer noted that the software might be particularly effective in partnership with GAMSTOP, a third-part ad-blocking package, and a service to block financial transactions to certain types of online websites.

Developers noted that the customer for the software was a mixture of those purchasing software for themselves and those purchasing on behalf of a loved one; one developer felt that the split would be approximately 80% who buy for themselves and 20% who purchase on behalf of someone else. All developers felt that involving friends and family members in treatment was highly conducive to a better success rate for the user in overcoming their gambling problems. As noted in the previous chapter, one developer is seeking to integrate a system that notifies a nominated friend/family member if the software is uninstalled (which may suggest the user experiencing difficulties).

It was not possible within the scope of the research to explore the topic of harm fully with problem gamblers who were interviewed, but the evidence that was collected mostly recounted instances of blocking software contributing towards a reduction in the following dimensions of harm:

- Financial harm
- Relationship disruption, conflict of breakdown
- Emotional or psychological distress
- Decrements to health
- Reduced performance at work/study.

This is not to say that blocking software would be ineffective in reducing other forms of harm. The scope of this research was limited to identifying instances where one or more dimension of harm had been reduced, where blocking software had, ostensibly, played a role in this process.

Software improvements

Operators and treatment providers felt that 'general' blocking software can be helpful if configured correctly, but that gambling-specific packages tend to be more effective (and feature more prominently within recommendations to gamblers). Operators do not tend to favour specific products but have a shortlist of products that they signpost towards, with the onus being on the user to research and identify the package that will be most useful to them.

Stakeholders were able to present a wide range of evidence to support assertions that software works and is effective. This ranged from individual accounts highlighted by treatment providers, to testimonials of satisfied users who had overcome their problems that were supplied by developers.

Stakeholders were able to suggest a range of ways that software could be more effective. These included:

- When a page is 'blocked', the message should do one or both of two things:
 - Signpost to further support and treatment providers e.g. Gamcare in the UK
 - Provide the user with a tailored message e.g. 'don't forget why you're using this software' which could be couple with other motivational messages like 'you've saved £XX since you installed!'. This would require some input from the user when first installing the software e.g. how much they are spending on average on online gambling per week. Any type of message could also express sentiment that the 'software' hopes that the user isn't gambling elsewhere.
- Software websites and literature could better link to support – even providing information on other types of support/useful websites to visit for first time visitors to a software website, who haven't yet purchased a product.
- Examining cost. The cost of licences for the available packages varies, with some being free whilst others costing a significant amount for a 12-month licence. Stakeholders noted that some operators do provide access to software for free. There were conflicting opinions on whether software should be free or available at a cost to the user; some stakeholders felt that by charging, users are more invested in the outcome (e.g. 'I've paid money for this, so I'm going to make sure I use it), whilst some strongly felt that costs to the user were a barrier and encouraged users to only purchase very short term licence access, where it was felt that long-term access would be most successful in terms of outcomes and preventing relapse.
- Ensuring that software developers are engaging with other treatment providers to try and provide a holistic level of treatment and signpost to additional methods that would help the user overcome problems. Some developers noted that they are already engaging with GAMSTOP and treatment providers.
- Ensuring that gambling related advertisements within other online content are blocked always. Developers noted this was challenging, but treatment providers suggested that removing any kind of trigger from the online experience of the user would help bolster effectiveness. A couple of the gamblers interviewed would find this useful, where they noted that the product they used didn't block (all) adverts at the moment.

One interesting point of discussion emerged around the use of software to help people gamble responsibly/sustainably and not develop problems. This would require developers to offer a version of their software targeted at non-problem gamblers to allow users to only access online gambling content during user-specified windows. This would allow users to only gamble on specific days/at specific times and ensure that there wasn't the possibility of gambling outside of these defined time-periods. Several stakeholders felt that if this type of software were available it would help those 'at-risk' gamblers control their play and reduce the risk of them developing problems.

Case example 5: Female C enjoys gambling online. She is concerned about the amount she is spending but has no desire to quit gambling altogether. A friend wanted help to gamble responsibly and installed blocking software but found the effects ‘permanent’, when she only wanted to block access at certain days and times. This has highlighted to Female A that the type of product she wishes to use is not currently available on the market.

4. The role of software post-GAMSTOP launch

The research has identified that most stakeholders and gamblers themselves don't think that self-exclusion and use of software are mutually exclusive; moreover, that they can both form part of a strategy to treat a user's problem and ensure a comprehensive strategy is in place to prevent the gambler from gambling. GAMSTOP will simply make the process of self-excluding easier by avoiding the need to self-exclude with individual UK-based operators separately. All groups consulted felt that software still brought benefits/additional benefits in the new landscape where GAMSTOP is (partially) live.

Within the brief for this evaluation, GambleAware set out some hypotheses in relation to why blocking software may still be needed or be superfluous once GAMSTOP launches. The table below comments on each in turn considering the evidence obtained in this study.

Superfluous	Still required	Evaluator comment
GAMSTOP will cover all online operators licensed by the Gambling Commission.	GAMSTOP does not prevent access to non-licensed operators (domestic and overseas). It may lead to an increase in the use of unlicensed overseas operators – at present determined gamblers have no need to go looking for these as they can find a new licensed operator from which they've not self-excluded. When GAMSTOP prevents that, they may just try harder to find an alternative (And the overseas market may seek harder to oblige).	It is a concern for the industry that GAMSTOP will still allow access to online gambling with sites licenced outside of the UK. For this reason, stakeholders felt that there will still be a requirement for software to help prevent access. In addition, in the short-term, GAMSTOP is currently in Phase I and so does not yet allow the users to self-exclude from all UK sites.

GAMSTOP will go live by the end of 2017.	Until GAMSTOP is live, there is no way to self-exclude from more than one online licence-holder simultaneously, and GAMSTOP is a complex IT and legal challenge (this is not a reflection on the RGA or KPMG, but based on experience of implementing large IT systems where any integration across organisations and systems or data migration is required).	GAMSTOP is currently in Phase I and so does not yet allow the users to self-exclude from all UK sites.
Given vigorous identification checks for online gambling, those who self-exclude with GAMSTOP will be prevented from opening new accounts.	GAMSTOP will block individuals based on their identity, leaving the opportunity to borrow another person's identity (with or without permission) in order to access gambling from devices accessible to the gambler.	Borrowing another person's identity is still a potential risk and was mentioned by treatment providers and developers as one reason that software will continue to be a helpful tool for problem gamblers and those at risk.
Registration with GAMSTOP may remove users from operator's own direct marketing distribution lists, which is an existing feature of individual operator self-exclusion schemes, and has some impact on affiliate marketing too.	Some blocking software reduces the amount of gambling advertising to which its users are exposed; this includes affiliate marketing which is not directly prevented by GAMSTOP.	Stakeholders felt that software which includes an ad-blocking feature was useful for problem gamblers, though this sentiment wasn't identified strongly within the primary research. The fact that GAMSTOP won't block all affiliated marketing or all types of advertising means there is still/more of a role that software can play here, though not all packages offer these features.

Although software blocking might provide a degree of flexibility, the trade-off is that it may offer less protection compared to self-exclusion (i.e. consumers could renege on it, operators aren't obliged to look out for people trying to subvert it etc.).	It may also be possible that blocking software could play a role in harm- minimisation by offering a more flexible alternative to self-exclusion, in that it can be tailored to a gambler's needs e.g. setting limits on time or money.	While at present this type of functionality does not exist, particularly within the gambling specific packages we tested, there is appetite for functionality that can place limits on time or money spent on gambling from consumers. This should be offered within new types of products, to avoid making it easier for people who wish for full blocking to still be able to gamble on certain days/times. We identified one developer that is seeking to offer software that notifies users when they have exceeded defined limits of play, but it isn't clear if even this software will 'block' at defined times²¹.
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²¹ <https://www.gamblewise.org>

This software was not tested (not in scope)

5. Conclusions and recommendations

Conclusions

Is blocking software technically effective in blocking access to online gambling?

- Based on the results of systematic testing, blocking software appears to be generally effective in restricting access to online gambling. None of the software packages on the market were found to block access to all websites associated with active UK Gambling Commission licences. However, access to most of the largest online operators that generate the highest amount of traffic were successfully blocked. Even without being 100% technically effective, the research found cases where software had helped individuals.
- Gambling-specific software usually performed well in blocking access to illegal and offshore gambling websites – blocking 80-90% of the sites tested. Software performed less well in blocking access to cryptocurrency gambling websites, but developers are starting to explore ways to improve their software in this respect and would be willing to explore other things as markets and customer demand for specific services shift / in response to policy requirements of Governments and regulators.
- Some respondents reported that just having the software installed was enough of a deterrent to attempt to gamble online, with some saying they wouldn't even attempt to do so, fully expecting attempts would be blocked²². Developers are aiming for full product coverage across all operating systems, but at this time the research did identify inconsistencies in the testing results for two packages on different operating systems.
- Gambling-specific software packages were found to be more effective in only blocking access to undesirable content, rather than blocking information that could be helpful where e.g. the word 'gamble' appears in the URL. Gambling-specific software packages also sometimes include ad blocking/additional features. Software is easy to install, and users will typically not know the software is there unless they make attempts to circumvent it.

Is blocking software effective in reducing gambling-related harm?

- The evaluation identified a number of instances that demonstrate software can be helpful in reducing the accessibility of gambling and, in doing so, play a role in reducing gambling-related harm. Benefits derived from use of blocking software were evident in feedback from users and all types of stakeholders interviewed.

²² For this reason, we suggest care is taken in publishing/reporting on the findings of this study so as not to undermine the opinion that software can be technically effective, where such opinion is held.

- Several case examples were identified where blocking software had been reported as useful in helping problem gamblers not gamble or not succeed when attempting to gamble. Types of harm associated with the problems experienced by software users where software helped included financial harm; relationship disruption, conflict or breakdown; emotional or psychological distress; decrements to health; and reduced performance at work/study.
- Software was not determined to work for everyone / in all circumstances, with gamblers having mixed views about the effectiveness of blocking software. Some had used software and reported it was helpful, for the reasons outlined above, while others using software found it technically ineffective in blocking access to gambling sites, and unhelpful as a result.
- A majority of respondents responding to our survey did say they would recommend software to others. Whilst we cannot conclude from a small self-selected sample whether this would be true of the wider population of gamblers, it does confirm, when read in conjunction with stakeholder feedback that blocking software is sufficiently effective/beneficial for at least some people to recommend it to others. Where respondents had not used software, there were sometimes perceptions that software is easy to get around; this appeared to be a barrier to use for some.
- Software was felt by stakeholders to be most effective when used on all devices, to discourage users easily being able to switch devices and still manage to gamble. Users themselves however suggested that price was a barrier in some cases to ensuring effective software is installed on all devices. Other gamblers felt installing software on all devices wasn't needed – in instances where, for example, their habit was linked to just one or a couple of specific apps (and they weren't interested in exploring other sites/apps to use for gambling).
- Software is not seen to be a standalone solution by most stakeholders, but could be in instances where problem gambling is solely limited to online participation. Blocking software was felt to work best as part of a treatment package tailored to the individual rather than being effective in isolation. Software was felt to be more useful in treating the symptoms, rather than treating the root cause of a problem. To address the root cause, other options such as individual therapy were mentioned to be an important component of a treatment regime.
- Stakeholders felt that blocking software was more effective where a friend/loved one was also involved in treatment, and one developer wishes to include functionality that notifies a nominated friend/loved one if the user tries to uninstall software.
- Awareness of software was mixed, with stakeholders suggesting about half of those reaching treatment providers were aware of software as a tool. Sometimes when people are not aware of software it can come as a welcome surprise to gamblers that felt that they had exhausted all other potential self-treatment methods available to them.

What does software do, and how does it work?

- Primarily, the research suggests that software makes it more hassle for gamblers to access content for the specific device that software is installed on. This may act only to delay a person

gambling; they will, for example, participate in another way or find a way around the software. Cases were however identified where the hassle factor led to the user having time to contemplate why they do not want to gamble (and so they make a choice not to continue in their efforts), or that they became bored of trying.

- Sometimes, software simply being installed was enough that users would not attempt to gamble using the device.
- Where software wasn't effective, this appears to be for individuals not yet adequately committed to overcoming their problem/where helping address a 'symptom' of the problem wasn't enough to discourage them finding other ways to feed their addiction.
- Overall:
 - Software is most likely to be successful as a tool for users who are committed to overcoming their problem. It can require willpower and focus to not try and circumvent the software
 - Software is useful in helping users overcome a problem with online gambling. There is some evidence from survey respondents that not being able to gamble could help users overcome urges to participate in other ways, but there are likely also users for whom use of software could encourage users to find an alternative way to gamble.

The future for blocking software

- GAMSTOP is expected to be helpful in allowing gamblers to self-exclude from all of the registered websites, but even with GAMSTOP fully operational this won't affect people being able to gamble via sites not licenced in the UK. This is one key reason why most stakeholders engaged within this research felt there is an important continuing role for software as a tool to help problem gamblers. An effective treatment package might include blocking software, GAMSTOP and therapy, and potentially other services e.g. third-party ad-blocking.
- Developers reported intentions to diversify their product offering, with an emerging focus on marketing their software to schools, universities and places of work – e.g. where software is not installed on individual machines, but blocks access for all computers running through a company server.
- There was some appetite identified for a new type of software that limits access to online gambling websites/apps, rather than blocking the content altogether. Stakeholders felt this would be a way for users to ensure that they don't develop problems and can only gamble at designated days/times, helping them participate responsibly and sustainably. This would be another use of software that is distinct from the aims and objectives of GAMSTOP.

- There are some barriers to the use of software currently available. These include:
 - Cost, though some stakeholders noted that charging can be helpful in achieving outcomes by making the user value the investment in the software. Cost could be more of a factor for certain packages and where users wish to install on multiple devices (i.e. more than the number of licences provided with the software purchase)
 - Perceptions about software being easy to circumvent
 - Perceptions/experiences of software not blocking access to some common websites/websites generally
- Perceptions and experiences in relation to software being easy to circumvent, or not blocking access, highlights the importance that developers continue to strengthen their software and make it more difficult for users to find workarounds. However, it should be noted that some of the workarounds identified through this research would be unlikely to be employed by typical software users (requiring high degree of skill with software and understanding of networks).

Recommendations for GambleAware

Our overarching recommendation to GambleAware, based on the findings of this research, was to consider funding or part-funding licences for individuals engaged with treatment providers who could benefit from software; i.e. those for whom treatment outcomes would likely be improved if blocking software was a component of their treatment regimen. We believe this will also offer GambleAware the opportunity to improve blocking software and learn more about its effectiveness, if this process can be used to require developers to commit to improvements.

With this in mind, on the basis of the research findings we recommend:

1. Encouraging developers to liaise with other stakeholders and signpost (reciprocally) to other advice and support from the block screens/consider providing tailored messages to users when they try and access blocked content; messages should relate to trying to get the user to relate to why they want to overcome their problem/not gamble²³
2. Encouraging developers to continue working to make sure their software works equally effectively on all platforms and to continue to plug potential ways of circumnavigating the software where they can

²³ We suggest that software could ask people to fill in the reason they are installing the software when they install it – in a way that they can't change once installed. This would be useful info for the developers in general – but could also be displayed as a message when it blocks things e.g. 'Remember X months ago when you installed this for reasons X, Y and Z, are you sure you want to be doing this?'.

3. Encouraging developers to consider offering different product types to allow people to use software to help them gamble responsibly e.g. limiting access to specific times rather than blocking altogether²⁴
4. Encouraging developers to include functionality/continue considering ways for software to block advertisements within content that remains accessible to remove any kinds of triggers that can be experienced during web browsing
5. Exploring with developers the possibility of including non-invasive monitoring and reporting features within the software that allow insights to be generated regarding user behaviour where blocking software is installed
6. Consider licencing/tailoring products for applications in workplaces and colleges, to help ensure that people are not able to feed habits while at work/study (and help increase productivity)

If GambleAware do opt to support a particular package or packages, this should provide opportunity for developers and treatment providers to contribute useful data over time to inform a larger scale assessment of the circumstances in which software works and its benefits. We therefore strongly suggest that GambleAware engage with developers and treatment providers to establish a monitoring framework that would allow for collection and sharing of useful monitoring information as a condition of GambleAware supporting a specific product or products. Useful information could include:

- Profiling those who take up the offer of software (or don't) and reasons
- Seeking feedback from users on whether software was helpful or unhelpful, and why
- Logging how many times (and how frequently) users attempt to access blocked content, and when content is blocked, whether a user continues to attempt to access blocked content, or they give up.

This study is the first attempt we are aware of to gather evidence to understand the benefits of blocking software in the context of online gambling. Whilst we consider the evidence generated to be sufficient to confirm blocking software can be beneficial to gamblers who want to restrict their access to online gambling, clearly the study does not provide a full assessment of the number of gamblers for whom blocking software could be effective or the circumstances in which it is most likely to work (or not). We encourage further research in this area and recommend that GambleAware continues to engage with blocking software developers to identify ways in which users might be accessed more readily in future research.

²⁴ If such software does not already exist; the research has identified a demand for this. Note that we have not conducted thorough searches to try and find software that limits access, rather than blocking.

6. Appendix I: Further details of methodology

The table below sets out the considerations that informed development of the methodology, along with the potential audiences that we propose to engage to gather evidence to inform the research objectives.

Consideration	Details	Evaluation questions	Suggested sources of evidence to inform these questions
Within the Langham definition of gambling harm ²⁵ , harm can manifest from problem gambling in a variety of ways	Gambling harm can manifest in a variety of ways, as set out within the definition proposed by Langham et al (2016)	Which aspects of harm can use of blocking software potentially remove risks or help treat those with a gambling problem? Which and why?	Treatment providers Software developers Operators Other stakeholders Problem / recovered gamblers
Blocking software is one potential tool to help limit the risk of developing harm / help treat harm	The research needs to explore the effectiveness of software alone and alongside other techniques to limit/reduce the risk of customers developing a problem with gambling. In addition, the research needs to consider the degree to which GAMSTOP is effective, and whether software conveys additional benefits above self-exclusion alone.	How aware are those at risk / with a gambling problem of software as a potential tool? Which packages have they heard of / used? Do people use blocking software on its own or in partnership with other types of solution? What / why?	Treatment providers Software developers Operators Problem /recovered gamblers, those at risk and affected others

²⁵(i) Financial harm; (ii) relationship disruption, conflict or breakdown; (iii) emotional or psychological distress; (iv) decrements to health; (v) cultural harm; (vi) reduced performance at work/study; and, (vii) criminal activity. It also proposes a definition of gambling-related harm to be 'any initial or exacerbated adverse consequence due to an engagement with gambling that leads to a decrement to the health or wellbeing of an individual, family unit, community or population.'

		How effective is blocking software at reducing risk / helping treat individuals on its own, or in partnership with other treatment methods? Why?	
Different software packages work in different ways and are available for multiple platforms	Software available on the market can incorporate a range of functionality e.g. block access to particular content, block advertisements, force a device to restart if removal of the software is attempted. In addition, few software packages offer functionality on all platforms, with some only available for e.g. Windows or Mac, at the time of testing. Most developers are currently in the process of developing working versions of software for additional platforms and mobile devices.	What do specific software packages 'do' / what are they designed to do? Which devices is blocking software available for? Does software function in different ways on different platforms?	Software developers Completion of technical testing
Many people will have access to multiple different devices to use for remote gambling activities	The research needs to explore customer behaviour, and the degree to which having multiple devices (i.e. desktop and mobile devices) might contribute to effectiveness (or provide a way for users to easily circumvent software if it cannot be installed on all devices)	On which devices are users installing blocking software? Which and why? Are users installing software on all of their devices, or only on some? Is blocking software effective when installed on some / all devices? Why?	Treatment providers Software developers Operators Other stakeholders Problem /recovered gamblers, those at risk and affected others
Software has applications for people with different	From scoping discussions and testing, software can potentially have uses in:	What do specific software packages 'do' / what are they designed to do?	Treatment providers Software developers

needs/in different circumstances	- Preventing access to customers who consider they are 'at risk' of developing a problem - Preventing access to users who have already developed a problem - Block online gambling related advertising to users - Providing links to helpful organisations / other methods for treatment	Which of these effects of software can customers actually experience? How far does software do these 'things' off the shelf vs. needing to be configured?	Operators Problem /recovered gamblers, those at risk and affected others Completion of technical testing
The motivations for, and 'triggers' for gambling, can influence the effectiveness of blocking software	A range of motivations (e.g. to chase losses, fun) and triggers (e.g. seeing advertisements, walking past a betting shop) can result in a user wanting to gamble, and these can also shape the behaviour of the individual and the potential effectiveness of software in helping limit risk/harm. For example, if someone is gambling to chase losses, we hypothesise that software may be less effective in limiting access if the person single-mindedly wishes to play to win back money they have already lost.	For which motivations and triggers (or combinations thereof) might blocking software be more or less effective? Which and why?	Treatment providers Software developers Operators Other stakeholders Problem /recovered gamblers, those at risk and affected others
A number of drivers exist for users who want to address risk/problem gambling	Linked to the Langham definition, these might include a wish to save money/address debt issues, appease affected others or help alleviate emotional and physical distress. We hypothesise that the commitment of the individual to addressing a problem is an important condition for use of software to be effective (e.g. whether use of software was the choice of the individual,	For which drivers to address risk/gambling problems might software be an effective solution? Why?	Treatment providers Software developers Operators Other stakeholders

	or the use was insisted upon by an affected other)		Problem /recovered gamblers, those at risk and affected others
For someone to experience a therapeutic benefit, software needs to result in key changes in the outcome (or potential outcome) of attempts to gamble	From scoping work and testing, software only appears to: 1) reduce the ease of gambling on the digital device on which it is installed – it makes it more hassle to gamble straight away, which we hypothesise reduces gambling frequency. (Software encourages 'rational' thought and consideration of what to do next) 2) reduce exposure to triggers e.g. advertising - that might encourage the user to try and gamble - whether online or other means.	What do users 'do' differently if using gambling software? Does software lead to the outcomes described? How and why? Do the outcomes described lead to therapeutic benefits for the user? Why? Are users using software as intended? Why? Are users able to / do they try to circumvent blocking software? How and why? How long is software used for? Why? Which barriers might reduce the likelihood of users benefitting from the use of software?	Treatment providers Software developers Operators Problem /recovered gamblers, those at risk and affected others

Components of approach

Secondary research

We allocated a small amount of resource for desktop review of secondary evidence. This followed the principles of a rapid evidence assessment to explore:

- Any key literature that we are already aware of that contains anything that may be of direct relevance to answering the research questions (i.e. evidence explores the effectiveness of software in a gambling harm-prevention/treatment setting)
- Anything of interest from outside of the gambling sphere i.e. evidence exploring the effectiveness of 'general' blocking software packages where restricting access / supporting user self-restraint was explored for effectiveness

We set aside further resource for review of any additional sources that were suggested by those we engaged within the primary research.

Primary research

This included:

- 1) Qualitative telephone interviews with stakeholders (including treatment providers, operators, software developers and academics)
- 2) Qualitative telephone interviews with a selection of problem gamblers and recovered problem gamblers
- 3) An online survey promoted to problem/recovered gamblers by treatment providers and through online forums

Technical testing

For Windows and Mac OSX testing, an automated script will be used to test whether domains listed as associated with active Gambling Commission licences can be loaded. Sites that can be loaded will be checked manually to understand whether that page would permit a visitor to gamble, or if not, to determine the content of the page.

Topic guides

Topic guide 1: Stakeholders

Introduction [To all]

Thank you for taking part within this research. As discussed, this work is examining the role of blocking software within the overall landscape for minimising gambling related harm. We'll be considering the role of software both as a self-help tool to minimise the risk of problems developing, and within any treatment regimen for problem gamblers.

Explain to the respondent (check again at the end of the interview):

- *Any information they provide will be treated in complete confidence and only used within the context of this research*
- *They can end the interview at any time*
- *If they wish to check anything in relation to the research they can contact XXXXXXXXXXXX at Winning Moves*
- *Research is conducted in line with the Market Research Society code of conduct. If they wish to check anything about our company / credentials, they can call the Market Research Society verification line on XXXXXXXXXXXX*

Rapport building [Asked to all]

To begin with, it would be useful if you could tell me a bit about yourself, your role and your responsibilities:

- What is your role at the organisation?
- What are your responsibilities?
- How long have you been with the organisation / in this role?

Awareness of blocking software [Asked to all]

- Are you aware of specific packages available on the market that can block access to gambling sites?

- Which packages have you heard of?
- What do these packages 'do'? *In their own words*
- Have you ever used any software packages to explore their capabilities and understand what they do?

Recommending blocking software to customers / patients [ONLY asked to treatment providers and operators, questions delivered as applicable]

- *If applicable* Does your organisation / do you, personally have a position / stance on the role of blocking software within the prevention / treatment landscape?
- Is blocking software something you recommend to customers / patients?
 - Why?
 - In what capacity – preventative / treatment? *Why? Do they think that software is more useful for prevention or treatment?*
 - Are there specific types of individual that you think blocking software would work more or less effectively for? *Who, and why?*
 - Do you recommend software on its own, or in partnership with other types of treatment / imitative? *What and why?*
 - Do you recommend that people install this on all devices / only on some? *Why?*
 - Where software blocks advertising, how important do you think this is in terms of helping the user?
- Prior to any recommendation, do you find that customers / patients have heard of blocking software, or tried using it previously? *Why did or didn't they? What was the outcome?*
- From your perspectives, does blocking software work 'off the shelf' vs needing to be configured?
 - How easy or difficult is it for users to make the software 'work' and do what it is needed to do?
- What does software actually 'mean' for customers / patients?
 - What are the elements of using the software that influence behaviour? *E.g. the blocking access to betting sites, blocking access to advertising, just making it more 'hassle' to gamble...?*
 - Is the outcome of using software better / worse for gamblers with differing motivations?
 - i.e. those chasing losses vs. doing it for fun?
 - Do people use software as intended by you / the developers?
 - Are there instances they can recall of people finding ways around software? *What types of things do people do?*
E.g.

- Gambling on a different machine which doesn't have software on
- Gambling in person, rather than electronically
- Using proxies or other workarounds to bypass software

Effectiveness of blocking software [Asked to all; NB may be some overlap for operators, treatment providers, developers, so tailor or omit questions and probes accordingly]

How do you think blocking software compares in how useful it is, compared to other measures for prevention / treatment? Why?

- *In particular, if they do not mention self-exclusion then please prompt on this*

From your perspectives and ability to comment, how aware are those at risk of developing problems with their gambling that software packages are available on the market?

- Where you are aware that people are using blocking software, do you find they are using this as a standalone, or in partnership with other types of activity / behaviour? What and why?
- How do you think people are using software – e.g. on their computers, mobile devices. *Are they blocking access to all types of gambling content, or limiting access to certain things / at certain times...*
 - Are people installing this on all of their devices, or only some?
- How long are people using software for?
 - *Is it something they consider is only needed for a specific amount of time, or something that people intend to use long-term?*
- Have users of software ever provided you with any feedback in relation to their experiences?
 - What did they say?
 - Was this broadly positive / negative?
 - *Is there anything that they can share with us – e.g. anonymised testimonials*
- How effective do you think currently available blocking software is:
 - In a preventative role
 - In a treatment role
 - Why do you say this?
- From your perspectives, does software block access to all of the sites that you consider should be blocked?

- From your perspective, considering the different roles:
 - o Are there circumstances in which you think that software works well? Which and why? *Probe to consider differing scenarios*
 - o Are there specific types of individual for whom you think software works well? Who and why? *Probe to explore this in depth – considering*
- How effective do you think software is in comparison to self-exclusion? Why?
- Are there any problems that you consider currently exist with software available on the market at the moment? What and why?
- Are there any barriers to users getting the benefits of using software? What and why?
- What do you think could make current software available on the market more useful / how could barriers be overcome?

- Overall, going forwards, do you think there is a need / use for blocking software within the landscape for minimising gambling-related harm? Why / why not?

Detailed exploration of products available [ONLY asked to academics and software developers; tailor questions accordingly for academics]

- What do specific software packages 'do' / what are they designed to do?
- What does software 'do' in comparison to self-exclusion?
- What specific components of the software do they think are most useful? *E.g. blocking access to betting sites, blocking adverts, other things?*
- Which devices is blocking software available for?
- Does software function in different ways on different platforms?
- How far does software work off the shelf, vs. needing to be configured?
- What do you consider to be the main strengths of your products, vs. other products available on the market? Why?
- Do you capture feedback from users of your software? How / why?
- Are you able to share anything useful – e.g. testimonials, research – with us for the purposes of conducting this research project?
- Do people use software as intended by you / the developers?
- Are there instances you can recall of people finding ways around software? What types of things do people do? *E.g.*
 - o *Gambling on a different machine which doesn't have software on*
 - o *Gambling in person, rather than electronically*

- *Using proxies or other workarounds to bypass software*

Closing [Asked to all]

If applicable. You mentioned you may be able to share useful evidence to contribute further to this research – e.g. testimonials, feedback, research they have conducted themselves. Provide your email address and ask them for a sense of when they may be able to share further information.

Thank you for your time today. If I have any further questions or need to check any of your responses, am I ok to give you a call back?
Capture email address if they prefer for subsequent contact

Offer Winning Moves / GambleAware contact details if they want to check anything in relation to the research

Offer MRS verification number if they want to verify anything about our company

Topic guide 2: Problem gamblers

Section 1 – Introduction

Thank you for agreeing to take part in this research for GambleAware, we very much appreciate your participation. If at any point you would rather not answer any of my questions, you are in no way obliged to do so. If at any point you would prefer to terminate the interview, please let me know and we'll not continue any further.

We'll be covering questions relating to blocking software - software that people can use to block access to online gambling sites and apps, on their computer or mobile devices. We'll be talking about your thoughts on how and why this software might be effective for people who feel they have a problem with their gambling, or that they might develop a problem. We'll also be discussing how effective you think blocking software might be in comparison to other ways that people might help address any problems with their gambling.

Recap the information within the respondent information sheet to confirm they understand that they can terminate the interview at any time.

To begin, what sorts of things do you currently do to limit the amount of time you were gambling or the amount of money you spent on gambling? *(Allow respondent to answer what is top of mind. Note down what they mention – it will be useful for later when talking through how other things compare to blocking software).*

Section 2 – Awareness

Thanks, ok, so this project is examining whether blocking software can help people to address any problems they are having with their gambling, or to reduce the risk of them developing a problem.

By 'blocking software' we mean software that can be installed on a computer or mobile device which blocks access to gambling websites. So, when you try and visit the website, the software stops you getting to the site – the page won't load.

There is specific software dedicated to gambling, and there are also general web blocking packages like NetNanny that can be configured to block access to gambling websites.

Before we invited you to take part in this research had you heard of any blocking software?

- What had you heard of?
- *Did they mention specific packages – note down which packages*
- When did you first hear about this? Have you come across it more recently?
- How/where did you hear about this? *List all the ways – e.g. adverts, treatment / therapy, online website such as Gamcare, friend / family*

Do you know anyone who has ever tried using blocking software?

- Do you know which package they used?
- Do you remember them saying anything about this software e.g. anything good or bad?
- Based on the things they said, do you think it was / wasn't useful for them? Why do you think that?
- What did the software 'do' for them? *E.g. meant they saw fewer adverts so less temptation, meant they couldn't gamble impulsively at home...*
- Do you know if they were using software on its own / alongside other things? Why?
 - o *If applicable Would it have worked on its own or did it need to be used alongside other things to make it work?*

And have you ever using blocking software yourself? Yes / No

NOW INTERVIEW TAKES ONE OF TWO PATHS:

IF THEY HAVE USED SOFTWARE THEMSELVES, Proceed through section 3 'Their own use of software'

IF THEY HAVEN'T USED SOFTWARE THEMSELVES, proceed through section 4

Section 3 – Their own use of software

IF HAVE NOT USED SOFTWARE THEMSELVES, skip to section 4

What software are you using/have you used? *Gather details of the package(s)*

Why did you decide to use software? *Probe in detail e.g.*

- *Did someone recommend this to them?*
- *Was this their decision, or someone else's?*
- *How did they hear about the specific package? Did they see an advert for something and thought they should give it a go?*

When was this?

- Are you still using the software now?
 - If no – why did you choose to stop using the software?

Did you install the software on all your devices or some? Which ones and why:

- Your computer(s) / laptop(s)
- Your mobile device(s)
- Your tablet

To get benefits from blocking software, do you think it needs to be installed on all devices, or is it ok to only install on some? Why do you say this?

Did the software you used need to be configured, or did it work 'off the shelf,' i.e. you installed it and you didn't have to change any settings?

- If you did need to configure things / change settings, what did you need to do?
- How long did this take?
- How easy or difficult was it to do this?

Did/does the software block the sites that you were trying to access?

- Did it do this on some devices / all devices?
- Did it block all of the sites – or were there some sites that would still load? Which sites? Why do you think these pages would still load?
 - o Were you able to manually tell the software to block additional sites like the ones that you found still loaded?
- Did you ever try and find a way to 'get around' the software? What did you do, and why?

Did/does the software block adverts on the devices it was installed on?

- Did you notice any websites where you could still see adverts?

Overall, how is the software helping/did the software help?

Researcher to probe around what the software actually 'did' e.g. not seeing adverts so less temptation, if they tended to gamble impulsively then blocking access means they had to think about whether they really wanted to gamble... etc.

Are there/were there any benefits from using the software? What are/were these, and how does/did the software help / not help?

Overall, how useful do you think blocking software is? Why?

- a. How does this compare to other things, such as self-exclusion / therapy?
- b. Does software work effectively on its own, or does it need to be used alongside other things? What and why?
- c. Are there specific types of people that you think software would be effective / most useful for? Why do you say this?
- d. Would you recommend blocking software to other people who were in your position? Who, and why?

If completed section 3 now skip to closing

Section 4 – Perspectives from non-users

FOR INDIVIDUALS WHO HAVE NOT USED SOFTWARE THEMSELVES

Did anyone ever recommend you use blocking software?

- Why did you choose not to use this yourself?

Based on our discussion today, is blocking software something that you think might be useful?

- For yourself? Why / why not?
- For others?
 - o Are there specific types of people you think might find blocking software useful?
- Would you recommend something like blocking software to friends or family? Why / why not?

Based on our discussion, how useful does blocking software sound to you, in relation to other things e.g. self-exclusion? Why?

- What would the software need to do to be useful?

Researcher to discuss and probe around the things that software 'does' e.g. blocking adverts, blocking access to sites – how useful are these different things and is there anything else that software could do?

Section 5 - Closing

As well as the things we have already discussed, are there any other things besides blocking software that you think are helpful for people who wish to better control their gambling?

- *Capture anything they say, and why they think this is useful*
- *Do they consider these things to be more or less useful than blocking software, self-exclusion?*
- *Researcher to probe around whether they think that things can work by themselves, or whether prevention/treatment needs to be about a number of different things working together...*

Based on what we have discussed, are there any improvements you would suggest to the currently available blocking software? *E.g. how it works, features... What, and why do you say that? What is it about what they have mentioned that would be helpful?*

Close interview: Check confidentiality, provide details of Winning Moves (including contact number) and Market Research Society verification line number.

Topic guide 3: Recovered problem gamblers

Section 1 – Introduction

Thank you for agreeing to take part in this research for GambleAware, we very much appreciate your participation. If at any point you would rather not answer any of my questions, you are in no way obliged to do so. If at any point you would prefer to terminate the interview, please let me know and we'll not continue any further.

We'll be covering questions relating to blocking software - software that people can use to block access to online gambling sites and apps, on their computer or mobile devices. We'll be talking about your thoughts on how and why this software might be effective for people who feel they have a problem with their gambling, or that they might develop a problem. We'll also be discussing how effective you think blocking software might be in comparison to other ways that people might help address any problems with their gambling.

Recap the information within the respondent information sheet to confirm they understand that they can terminate the interview at any time.

To begin, what sorts of things did you do to limit the amount of time you were gambling or the amount of money you spent on gambling?
(Allow respondent to answer what is top of mind. Note down what they mention – it will be useful for later when talking through how other things compare to blocking software.

Section 2 – Awareness

Thanks, ok, so this project is examining whether blocking software can help people to address any problems they are having with their gambling, or to reduce the risk of them developing a problem.

By 'blocking software' we mean software that can be installed on a computer or mobile device which blocks access to gambling websites. So, when you try and visit the website, the software stops you getting to the site – the page won't load.

There is specific software dedicated to gambling, and there are also general web blocking packages like Net Nanny that can be configured to block access to gambling websites.

Before we invited you to take part in this research had you heard of any blocking software?

- What had you heard of?
- *Did they mention specific packages – note down which packages*
- When did you first hear about this? Have you come across it more recently?
- How/where did you hear about this? *List all the ways – e.g. adverts, treatment / therapy, online website such as Gamcare, friend / family*

Do you know anyone who has ever tried using blocking software?

- Do you know which package they used?
- Do you remember them saying anything about this software e.g. anything good or bad?
- Based on the things they said, do you think it was / wasn't useful for them? Why do you think that?
- What did the software 'do' for them? *E.g. meant they saw fewer adverts so less temptation, meant they couldn't gamble impulsively at home...*
- Do you know if they were using software on its own / alongside other things? Why?
 - o *If applicable Would it have worked on its own or did it need to be used alongside other things to make it work?*

And did you ever use blocking software yourself? Yes / No

NOW INTERVIEW TAKES ONE OF TWO PATHS:

IF THEY HAVE USED SOFTWARE THEMSELVES, Proceed through section 3 'Their own use of software'

IF THEY HAVEN'T USED SOFTWARE THEMSELVES, proceed through section 4

Section 3 – Their own use of software

IF HAVE NOT USED SOFTWARE THEMSELVES, skip to section 4

What software did you use? *Gather details of the package(s)*

Why did you decide to use software? *Probe in detail e.g.*

- *Did someone recommend this to them?*
- *Was this their decision, or someone else's?*
- *How did they hear about the specific package? Did they see an advert for something and thought they should give it a go?*

When was this?

- Are you still using the software now? *i.e. in a preventative way, to ensure they don't develop any problems again*
 - If no – why did you choose to stop using the software?

Did you install the software on all your devices or some? Which ones and why:

- Your computer(s) / laptop(s)
- Your mobile device(s)
- Your tablet



To get benefits from blocking software, do you think it needs to be installed on all devices, or is it ok to only install on some? Why do you say this?

Did the software need to be configured, or did it work 'off the shelf,' i.e. you installed it and you didn't have to change any settings?

- If you did need to configure things / change settings, what did you need to do?
- How long did this take?
- How easy or difficult was it to do this?

Did the software block the sites that you were trying to access?

- Did it do this on some devices / all devices?
- Did you ever try and find a way to 'get around' the software? If so, what did you do, and why?
- Did it block all of the sites – or were there some sites that would still load? Which sites? Why do you think these pages would still load?
 - o Were you able to manually tell the software to block additional sites like the ones that you found still loaded?
- Did you ever try and find a way to 'get around' the software? What did you do, and why?

Did the software block adverts on the devices it was installed on?

- Did you notice any websites where you could still see adverts?

How did the software help?

Researcher to probe around what the software actually 'did' e.g. not seeing adverts so less temptation, if they tended to gamble impulsively then blocking access means they had to think about whether they really wanted to gamble... etc.

Were there any benefits from using the software? What were these, and how did the software help / not help?

Overall, how useful do you think blocking software is? Why?

- e. How does this compare to other things, such as self-exclusion / therapy?



- f. Does software work effectively on its own, or does it need to be used alongside other things? What and why?
- g. Are there specific types of people that you think software would be effective / most useful for? Why do you say this?
- h. Would you recommend blocking software to other people who were in your position? Who, and why?

If completed section 3 now skip to closing

Section 4 – Perspectives from non-users

FOR INDIVIDUALS WHO HAVE NOT USED SOFTWARE THEMSELVES

Did anyone ever recommend you use blocking software?

- Why did you choose not to use this yourself?

Based on our discussion today, is blocking software something that you think could have been useful when you were gambling?

- For yourself? Why / why not?
- For others?
 - o Are there specific types of people you think might find blocking software useful?
- Would you recommend something like blocking software to friends or family? Why / why not?

Based on our discussion, how useful does blocking software sound to you, in relation to other things e.g. self-exclusion? Why?

- What would the software need to do to be useful?

Researcher to discuss and probe around the things that software 'does' e.g. blocking adverts, blocking access to sites – how useful are these different things and is there anything else that software could do?

Section 5 - Closing

As well as the things we have already discussed, are there any other things besides blocking software that you think are helpful for people who wish to better control their gambling?

- *Capture anything they say, and why they think this is useful*
- *Do they consider these things to be more or less useful than blocking software, self-exclusion?*
- *Researcher to probe around whether they think that things can work by themselves, or whether prevention/treatment needs to be about a number of different things working together...*

Based on what we have discussed, are there any improvements you would suggest to the currently available blocking software? *E.g. how it works, features...* What, and why do you say that? *What is it about what they have mentioned that would be helpful?*

Close interview: Check confidentiality, provide details of Winning Moves (including contact number) and Market Research Society verification line number.

Topic guide 4: Work extension; further questions for developers

Introduction

Since our first interview, have you made any changes to the software/released new versions?

- What functionality / changes does the new version include?
- Why did you make these changes?

Has anything changed in terms of your software product offering?

- How and why?

Ad-blocking

GambleAware were particularly keen to understand the existing functionality / potential in relation to blocking gambling advertisements. The research identified that in some circumstances these could act as a 'trigger' to harm for online problem gamblers.

To what degree do you encounter demand for gambling ad blocking from your customers?

- Has this changed over time? Any idea(s) why?

Does your software currently include functionality to block gambling related advertisements?

- How does this work?
- Why did you build this function into the software?

Have customers given you any feedback in relation to ad blocking functionality?

Does software block ads:

- In browser
- In pop-ups (or block pop-ups altogether)
- In other media e.g. embedded videos

What plans do you have to introduce / improve ad blocking?

- Are there any 'weaknesses' at present e.g. browsers/operating systems/media hosts for whom it is more challenging to enable ad blocking?

From your perspective, how are gambling operators responding to ad blocking?

Blocking – additional perspectives

I'd like further information on how you identify websites to block. How does the software 'work' and know which sites to block/whitelist?

- By jurisdiction / region
- Keywords



- Block lists
- What do any specialist algorithms do, and how do they 'work'?

In terms of how your software 'works', this research identified that your software didn't block all of the websites associated with active UK Gambling Commission licences.

How easy / difficult would it be to block access to a prescribed list of websites?

Would you be able / willing to adapt software to block the domains associated with UK licences?

Would you be able to ensure that as new domains are added, these are also blocked? How would you ensure this?

Within this research, we have identified that a number of international websites are illegally allowing UK customers to participate in online gambling. These are mostly based in Curacao, Antigua and Barbuda, Costa Rica and British Indian Ocean territories

How do you ensure that websites hosted in specific territories / illegal gambling websites are blocked by the software?

Do your customers ever discuss their ability to find illegal sites to participate in online gambling?

In terms of your customers:

- How many enquire / purchase a product for themselves?
- How many enquire / purchase a product on behalf of someone else?

Do you think software is more or less effective when another individual is engaged in treatment of their friend / loved one? How and why?

The UK Gambling Commission is interested in whether software blocks / will in future potentially block access to:

- Cryptocurrency gambling websites
- Skin betting; i.e. trading cosmetic items within video games that enable the customer to 'cash out' an in-game item for cash

To what degree are you aware of these types of gambling?



What functionality does your software currently have / are you hoping to develop in relation to these types of gambling?

What challenges exist to software blocking access to these types of gambling?

Thank and close

Online Survey Script

Details of survey routing are not included.

Thank you for choosing to take part in this anonymous online survey for GambleAware. It should take less than 10 minutes to complete.

The aim of this survey is to discuss your thoughts on what tools/approaches you think are effective to help people at risk, or who are experiencing problems with their gambling. This will include capturing your thoughts in relation to the effectiveness of software that blocks access to gambling sites (you don't need to have used software yourself).

All responses are confidential and there are no right or wrong answers. Please be as open and honest as you feel comfortable with.

GambleAware (gambleaware.org) is an independent charity, whose aim is to minimise gambling-related harm. They have commissioned Winning Moves, an independent research consultancy, to carry out this survey.

If you have any questions about this survey, please email XXXXXXXXXXXXX

If you would like to verify our details, you can contact Winning Moves on XXXXXXXXXXXX or the Market Research Society on 0800 975 9596.

* I. Which of the following statements best describes you? (Select one only)

- | | |
|--|--|
| ☐ I am a gambler, but I don't think I'm at risk of developing a problem with my gambling | ☐ I'm not a gambler myself, but I feel that a friend or relative is at risk of developing a gambling problem |
| ☐ I am a gambler and I'm concerned about my gambling becoming a problem | ☐ I'm not a gambler myself, but a friend or relative has a gambling problem |
| ☐ I am a gambler and think that I currently have a problem with my gambling | ☐ I'm not a gambler myself, but a friend or relative has recovered from a gambling problem |
| ☐ I used to gamble and had a problem with gambling, which I've recovered from | ☐ I prefer not to say / None of the above |

* 2. Thinking about yourself / the friend or relative that has / had / may be at risk of developing a problem, how do you / they tend to gamble? (Select all that apply)

- | | |
|--|--|
| ☐ In a betting shop | ☐ On a desktop computer at work |
| ☐ In an arcade | ☐ On a laptop computer |
| ☐ In a casino | ☐ On a smartphone |
| | ☐ On a tablet |
| ☐ On a desktop computer at home | |

* 3. Which of the following approaches to helping address problem gambling / organisations that provide information and support in relation to problem gambling have you heard of? (Select all that apply)

- ☐ Self-exclusion - *this is, asking the high street bookmakers, other gambling venue, or online gambling site to bar you from being able to gamble with them*
- ☐ National Gambling Helpline
- ☐ GamCare
- ☐ National Problem Gambling Clinic
- ☐ Don't know / None of the above
- ☐ Use of blocking software on computers / mobiles (please state which software you have heard of). *This is software that won't let you load websites on which you would be able to gamble online / by mob*

* 4. In terms of the approaches you're aware of, which of these do you think are helpful in assisting gamblers reduce their risk of developing problems / treat problems? (Select all that apply)

☐ Self-exclusion - *this is asking the high street bookmakers, other gambling venue, or online gambling site to bar you from being able to gamble with them*

☐ Gambling blocking software - *this is software that blocks you being able to access websites on which you could gamble online / by mobile*

☐ Don't know

☐ Other (please specify)

* 5. In the box below, please explain why you think self-exclusion is helpful in assisting gamblers reduce their risk of developing problems / treat problems

6. In the box below, please explain why you think gambling blocking software is helpful in assisting gamblers reduce their risk of developing problems / treat problems

* 7. Have you or a friend / relative ever self-excluded? (Select one only)

- ☐ I have
- ☐ A friend or relative has
- ☐ Neither
- ☐ Don't know

* 8. Did you / your friend or relative find self-exclusion helpful? (Select one only)

- ☐ Yes
- ☐ No

Please explain why self-exclusion was helpful / not helpful

* 9. In the box below, please describe how self-exclusion could be **more** helpful in assisting people reduce risks / treat problem gambling?

* 10. Have you or a friend / relative ever used blocking software? (Select one only)

- ☐ I have
- ☐ A friend or relative has
- ☐ Neither of the above

* 11. Do you remember which software you or a friend / relative used? (Please outline details in the box below)

* 12. What did the software do? For example, did it entirely block access to gambling websites, did it only allow access during certain time windows? (Please describe details in the box below)

* 13. Did you / your friend or relative find this software helpful? Please explain why / why not in the box below.

* 14. Based on your awareness / experience, would you recommend this software to a friend? (Select one only)

- ☐ Yes
- ☐ No

Please explain why / why not

* 15. What are your main concerns in relation to you / a friend or relative and problems with gambling (Select all that apply)

- | | |
|---|---|
| ☐ Financial harm - issues relating to money and spending too much / spending money irresponsibly | ☐ Negative impact on physical health |
| ☐ Loved ones experiencing hardship, stress and anxiety | ☐ Not taking part in cultural events and activities |
| ☐ Relationship disruption, conflict or breakdown | ☐ Reduced performance at work / study |
| ☐ Emotional or psychological distress | ☐ Risk of engaging in or engagement with criminal activity |

☐ Other - please describe

* 16. Based on what you know about self-exclusion, do you think it might be helpful for you / your loved one to explore this further?

☐ Yes

☐ No

Please explain why it would be helpful or not helpful

* 17. Based on what you know about blocking software do you think it might be helpful for you / your loved one to explore this further?

☐ Yes

☐ No

Please explain why this would be helpful or not helpful

Closing

Thank you for your time today.

If you or someone you know is experiencing a problem with gambling or would like to learn more about gambling responsibility, including self-exclusion and blocking software, please visit <https://www.begambleaware.org/>.

Please click 'done' to submit your responses.

Participant information sheet

You are invited to take part in this research project, which is evaluating the effectiveness of blocking software. You have been invited because you have indicated that you are concerned that you may be gambling too much or have previously had issues with your gambling.

This Participant Information Sheet/Consent Form tells you about the research project. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or your gambling support provider.

Participation in this research is voluntary. If you don't wish to take part, you don't have to.

If you decide you want to take part in the research project, you will be asked to confirm that you agree to the terms and conditions. By confirming, you indicate you:

- Understand what you have read
- Consent to take part in the research project.

What is the purpose of this research?

The aim of this project is to evaluate the effectiveness of software which blocks access to gambling sites, for people who are having difficulties controlling their gambling. It is seeking to establish in what form this software may be most effective, and why. The project is collating responses from a range of groups affected by gambling.

What does participation in this research involve?

If you agree to participate you will be asked to participate in a 30-45 minute telephone interview.

Other relevant information about the research project

Participants will be recruited in various ways, including treatment providers.

The project involves researchers from Winning Moves Ltd. They work to Market Research Society standards at all times, meaning they adhere to conduct research professionally.

Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

If you do decide to take part, you will be emailed a copy of this Participant Information and Consent Form to keep.

What are the possible risks and disadvantages of taking part?

If you become upset or distressed as a result of your participation in the research, we encourage you to contact the National Gambling Helpline: freephone 0808 8020 133 which is available 8am-midnight 7 days a week. Or speak to your gambling support service provider.

If you experience extreme distress or have concerns for your safety, we encourage you to contact the appropriate emergency services for assistance. A list of emergency, crisis and other support services can be found at <https://www.begambleaware.org/>

What if I withdraw from this research project?

If you do consent to participate, you may withdraw at any time. If you decide to withdraw from the project, please notify a member of the research team before you withdraw. This notice will allow that researcher to inform you if there are any implications for your welfare in terms of withdrawing.

What happens when the research project ends?

When the research project ends, the findings will be made publicly available on the GambleAware website <https://about.gambleaware.org/research/>

What will happen to information about me?

By providing consent, you consent to the research team collecting and using personal information about you for the research project. Any information obtained in connection with this research project that can identify you will remain confidential. Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law.

The information that the research team collects and uses is collected from focus groups and telephone interviews. The data collected will remain anonymous. To further protect anonymity, you can sign up for this program using your real name or a pseudonym, if you prefer. The data will be stored without any identifiable information at Winning Moves Ltd for seven years, in password-protected files. Your contact details will never be shared with anyone outside the research team.

It is anticipated that the results of this research project may be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way

that you cannot be identified, except with your permission. The results from this study will be published in a summarised format without identifying individuals.

In accordance with relevant UK privacy and other relevant laws, you have the right to request access to your information collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please contact the study team member named at the end of this document if you would like to access your information.

Any information obtained for the purpose of this research project that can identify you will be treated as confidential and securely stored. It will be disclosed only with your permission, or as required by law.

If knowledge acquired through this research leads to discoveries that are of commercial value to GambleAware, the researchers or their institutions, there will be no financial benefit to you or your family from these discoveries.

Winning Moves will receive a payment from GambleAware for undertaking this research project.

No member of the research team will receive a personal financial benefit from your involvement in this research project (other than their ordinary wages).

Further information and who to contact

The person you may need to contact will depend on the nature of your query.

If you want any further information concerning this project or if you have any problems, which may be related to your involvement in the project, you can contact any of the following people:

XXXXXXXXXX

7. Appendix 2: Existing evidence regarding the effectiveness of blocking software

Introduction

As cited in the introduction, there exists very limited evidence into the effectiveness of gambling blocking software. Therefore, a small amount of resource was allocated to undertake a rapid evidence assessment (REA) of any more general evidence around blocking software. This review examined internet content filtering and blocking software generally, particularly looking at industries other than gambling²⁶.

This research suggested that the majority of blocking software is categorised under parental control or content filter software, rather than sector-specific products. There were found to be several reports and articles in recent years relating to ad blocking; however, this type of software was not considered to be beyond the scope of this research. The main scope of this review was to look at parental control and content filter software to determine how effective it is and any advantages or disadvantages. Only free to access literature was evaluated.

Findings

There appear to be two main themes in the research on content blocking and internet filtering software, the effectiveness of the software and the application of the software in public buildings such as schools and libraries.

Searches on web filtering, content blocking, etc. identified a large number of articles, many of which are journalistic, blogs or industry generated. There are very few academic research projects and of the ones identified, many were carried out some time ago and may not reflect developments in modern content blocking software.

While much of the academic research available examines the effectiveness of content blocking software and over/under blocking, there is limited information on the effective application of this software and ways in which it can be used or enhanced to increase the success rate of blocking. Advantages and disadvantages are mainly identified as the ability of software to block targeted content vs the blocking of more benign content such as health information or other educational information.

²⁶ It is possible that there might be other studies of relevance to the research objectives e.g. sources that have looked into things like ad-blocking, but the sources reviewed below were deemed most relevant to the core objective of understanding whether blocking software can be a useful technical and therapeutic tool to limiting access to certain types of content.

The research identified sources ranging from 2000 – 2017 and sources mainly focus on the effectiveness of content filters and the impact they have on blocking access to other ‘good’ information, e.g. pornography vs. health information.

The main points of interest that the REA identified were:

- Blocking software can be especially effective in limiting access to specific types of content; the studies above highlight that circa 90% - 94% effective can be achieved at its most restrictive setting
- At the most restrictive setting however, up to 24% of ‘good’ health information can also be blocked
- Filters in libraries and schools are reasonably effective but have a negative impact on the quality of education by blocking educational content
- One study suggests that internet filters are not effective at shielding early adolescents.

Summarised findings from individual sources are set out in the following sections.

Effectiveness of content filters

The Effectiveness of Content Filters. Philip B Stark, November 10 2007

<https://www.stat.berkeley.edu/users/stark/Preprints/filter07.pdf>

The purpose of this study was to determine the effectiveness of content filters in blocking access to ‘adult’ material on the internet by using specific web pages to test over and under blocking of content. Large data samples of searches and pages from the main search engines were used and found that the most restrictive filters were able to block between 91% and 94% of adult content in searches. Filters varied significantly and some blocked as low as 40%. In all cases a sizeable number of clean web pages were also blocked.

Internet Filter Effectiveness: Testing Over- and Under Inclusive Blocking Decisions of Four Popular Web Filters. Christopher Hunter, May 2000

govinfo.library.unt.edu/copacommission/papers/filter_effect.pdf

This study assesses the effectiveness of four popular filtering programs (circa 2000), CYBERSitter, Cyber Patrol, Net Nanny and SurfWatch. The findings of the study suggest that support for filtering software should be reconsidered as overall, filters failed to block objectionable content 25% of the

time and at the same time blocked 21% of benign content. It should be noted however that this study was carried out around 2000 and developments could produce different results today.

Does pornography blocking software block access to health information on the internet?

Caroline Richardson, Paul Resnick, Derek Hansen, Holly Derry, Victoria Rideout, December 11 2002

<https://jamanetwork.com/journals/jama/fullarticle/195607>

This study was commissioned by the Kaiser Family Foundation and published in the Journal of the American Medical Association. The objective of the study was to quantify the extent to which pornography-blocking software used in schools and libraries limits access to health information Web sites.

The results of the study found that at the least restrictive blocking setting, blocking was successful at 84% - 90%. At a moderately restrictive setting blocking was at 90% and at the most restrictive setting it was at 91%. Across the same range of setting, health information blocking rates ranged from 1.4% to 24%.

Internet Filtering Technology and Aversive Online Experiences in Adolescents.

Andrew Przybylski and Victoria Nash, May 2017

[https://www.jpeds.com/article/S0022-3476\(17\)30173-7/fulltext](https://www.jpeds.com/article/S0022-3476(17)30173-7/fulltext)

The objective of this study was to determine the effectiveness of internet filtering technology and its ability to shield adolescents from aversive experiences online. The study concluded that contrary to hypotheses, policy, and industry advice regarding the assumed benefits of filtering there was convincing evidence that Internet filters were not effective at shielding early adolescents from aversive online experiences.

Application of content filters

Website Blocked: Filtering Technology in Schools and School Libraries. Jennifer Overaa, December 2014

scholarworks.sjsu.edu/cgi/viewcontent.cgi?article=1177&context=slissrj

This report looks at the impact filtering technology has in schools and libraries in the US where they are required by law to use filters. The report states that research shows that filtering software is not 100% effective and that the use of filtering software negatively impacts the quality of education by blocking Web 2.0 sites and online tools students need in order to receive a 21st century education. Filtering software may have its place in schools; however, careful and limited use of the software

combined with non-technological strategies will better enable students to access the information and tools they need for 21st century learning while remaining protected from inappropriate content.

Content Filtering in UK public libraries.

Daniel Payne, Sarah Arkle, Jennifer Gallagher, Stuart Lawson, Jo Richardson, Lauren Smith, Katherine Stephan, February 2016

https://figshare.com/articles/Content_filtering_in_UK_public_libraries/2059998

This study produced a dataset of the extent of content filtering in UK libraries and looks at what categories libraries are choosing to block, e.g. pornography, gambling, nudity, etc. This research was carried out by a group of volunteers rather than through academic research but the information has been included in this report as data was gathered under the Freedom of Information Act (2000) and the Freedom of Information Act (Scotland). Seven questions were asked to ascertain the extent of public authorities' filtering decisions, and these responses were tracked and made public via the website <http://www.whatdotheyknow.com>.

This dataset represents a collation of these responses with individual links to the WDTK response, and attempts to map the extent of category-based web filtering on library public library PCs in the UK. Key information such as list of categories blocked and name of filtering software have been included in the database.

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